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Justice as Something Else

Anthony de Jasay

Why must nearly all the current normative theories of distribution represent justice as something else? Why are we led to see justice as fairness, as the greatest mutual advantage, as the minimax relative concession, as reciprocity, as the terms of a society-wide agreement that cannot reasonably be rejected, as reversibility, as impartiality? There is nothing in the lengthening series of aliases suggesting that the ingenuity moral philosophers deploy in reinventing justice as something else is about to run out of further variants.

Arguably, Kant has set the precedent. His categorical imperative identified justice as universalizability. However, his was not a principle capable of regulating all distributive conflicts, notably the conflicts that may arise from the distribution of initial endowments of talents, advantages, and possessions. A rule one wishes to apply to oneself is universalizable if it is a requirement of reason to wish it to apply to everyone else, and vice versa.

Universalizability, therefore, is incapable of generating rules of distribution that systematically favor the weak, the unsuccessful, and the poor. The strong, the successful, and the rich cannot plausibly be held to wish redistributive rules to apply to themselves that would predictably work to their disadvantage.

This Kantian defect, to call it that with tongue firmly in cheek, was radically remedied by John Rawls's "justice as fairness," where a sense of fairness impels all adult members of society to accept those principles of justice that it would be rational to adopt in an "original position." In this original position, all initial endowments disappear behind a "veil of ignorance." If people had no endowments, or had equal ones, or were ignorant of what they had, it would be para-

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rational[1] for them to agree that inequalities are to be evened out except if they work to the advantage of the least favored among them. This, Rawls's "difference principle," is the product of prudential reason once fairness has led all to ignore any initial advantages they may have.

Although Rawls (1971: 112, 343) defines fairness as submission by each to the same restrictions all others submit to, if each in fact shares in the common benefits secured by these restrictions—which amounts to "fairness as no free riding"—it is clear that the role he assigns to fairness is far wider.[2] Fairness in his theory requires the more favored to agree to the sort of distributive rule they would prefer if they were not more favored—a very different and more inclusive idea than "no free riding." If fairness were to mean something less than this, or if people did not feel bound to be fair in this radical sense, the sort of agreement that is supposedly rational in the original position (though not elsewhere) could not be reached. Fairness as initial equality is an axiom of justice as fairness.

Instead of simply treating it as an axiom, however, Rawls seeks to deduce it from the claim that initial endowments are morally arbitrary—a claim that might well not impress anyone who has not yet adopted moral rules and must first be induced, by the appeal to fairness, to enter into the "original position" by adopting some. Even if it were not dubious practice to invoke morals in order to generate morals, it is not at all clear why the fact that something is morally arbitrary should oblige us to take no account of it in deliberations about moral rules of distribution.

Among other "justices as . . .," and next only to Rawls's, the most influential is probably Thomas Scanlon's (1982) justice as unrejectability. Brian Barry's (1995) "justice as impartiality" is a synthetic derivative of both, with a preponderance of Scanlon. The three together incorporate most of the currently dominant mainstream theory that, or so I shall argue, treats justice as a matter of social choice rather than, as in the traditional approach, a quality of individual acts.

Under Just Conditions, What We Accept Is Just

In Rawls, once he has led people into the original position (and some auxiliary assumptions are made), agreement on distributive prin-

[1]I call the agreement upon a maximin strategy equilibrium "pararational" (rather than rational), because while maximin is argued for by a reason ("make the worst possible outcome as good as you can, even if you must make the best possible outcome less good than it might have been"), the reason is obviously not the best possible one. The strategy that maximizes the mathematical expectation of utility is argued for by a reason that is by definition the best, hence better than maximin.

[2]Compare Hart (1983: 119).

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ciples is a matter of mutual advantage; it has instrumental value. In Scanlon's contractualist theory, in sharp contrast to Rawls, agreement need not yield mutual advantage in order to be reached. It may yield it accessorily, but people do not seek it to make themselves better off in the ordinary narrow sense.[3] They seek it because they are motivated by a common desire for agreement that is inherent in morality (Scanlon 1982: 128).

So far, there is nothing implausible or far-fetched in Scanlon's construction. Less extravagantly than Rawls, it does not require harsh and heroic renunciation of initial advantages. It is easier to take it that people wish to live in agreement with each other, on the basis of which they can mutually justify their conduct (ibid.: 117) than that they commit themselves to a distributive rule that deprives the more favored among them of any advantage over the less favored.

However, this judgment about Scanlonian moderation compared to Rawlsian radicalism quickly turns out to require qualification. In Scanlon, for the agreement to produce unrejectable rules that will be morally wrong to transgress, the agreement must be both informed and unforced (ibid.: 110–11). The information condition can, I believe, be safely accepted, but what about the condition of unforcedness?

Unforcedness, as Scanlon explains it, means not only that no party must be coerced to agree, but that none must be in a "weak bargaining position" enabling others "to insist on better terms" (ibid.: 111). But better than what? Manifestly, there is a hidden norm both for bargaining strength (none must be in a stronger or weaker position than the norm) and for the terms eventually struck in the bargain (they must not be better for some, worse for others). But if such a norm is tacitly pre-set, the desired bargaining solution will be a disguised initial condition of the theory and not a theorem of it. Though Scanlon, to his credit, refrains from saying so, we may take it that people starting from initially equal endowments would find rules providing for continuing equality unrejectable—they are left with no ground for rejection. Hence, they would find inequality in breach of the agreement unjust. This is plausible, but how interesting is it?

[3]Whether the narrow sense makes sense is perhaps questionable. If people like to agree, they must prefer agreement to no agreement, with other things remaining equal. Can one nevertheless say that reaching agreement does not make them better off? One can, if preference is taken as a "subjective" and better off as an "objective" condition. If this distinction is upheld, it is a sensible statement that "he prefers to be worse off," or that "he is better off but ignores it"; if not, not. Austrian value theory and Paretian welfare economics are on one side of this divide, the utilitarianism of the Impartial Observer on the other.

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Scanlon's argument is silent on whether reasonable unrejectable agreement could be found if initial conditions were unequal. However, given the norm for bargaining power and for the bargain itself, planted at the base of the theory, it seems that initial conditions that violate this norm could either not produce unrejectable terms, or if they did, unrejectability would cease to signify justice (i.e., cease to be a sufficient condition of it). In either case, the theory of justice as unrejectability would seem to hold if and only if initial conditions were just. If so, it is not justice that follows from unrejectability, but unrejectability from justice.

The Desire for Agreement, on What Terms?

Scanlon could well object that not all terms that were not in fact rejected were unrejectable in his sense. His unrejectability springs from the reasonableness of the terms, not from such contingencies as the pressing needs of one party and the ease and comfort of another. This defense fails to deal with the objectionable tactics of building equality into the foundations of the theory by the seemingly innocuous device of requiring equal bargaining power. In addition, such a defense also exposes another vulnerable flank of justice as unrejectability, and by extension of other "justices as," too.

All we know of the common desire for agreement is that all are "moved by it to the same degree" (ibid.: 111). But what degree, how high? Given a very high degree, a variety of widely divergent terms may all be unrejectable. Nothing ensures a determinate solution. This might not matter much if the whole set of possible solutions were just by virtue of being unanimously agreed upon, or if there were independent means of identifying a unique just solution, or at least a just subset within the possible set. Would the test of "reasonableness" provide such a means? Or, what is a different proposition, is it that only reasonable terms are truly unrejectable? But what, then, is the test of reasonableness? How do we recognize it? One has the uncomfortable feeling of being led round and round in a circle.

I would submit that we are inadvertently moving back and forth between what are, in fact, two theories separated by the idea of reasonableness, which acts as a "cutout." On the near side, there is a theory in which the desire for agreement and initial equality jointly produce a bargaining solution, which is both unrejectable and normatively unique because it must correspond to the tacit norm built into the initial conditions (i.e., that the terms must not be "better for some and worse for others"). On the far side of the cutout, we find a much simpler theory. Among possible bargaining solutions, there is at least

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one set of terms that is reasonable. Since it is unreasonable to reject that which is reasonable, these terms will be unrejectable by reasonable persons, hence they will be just. There is no need for a desire for agreement, and it does not matter whether initial endowments were equal or not, for all will agree to their reasonable redistribution.

For reasonableness to exert the force this theory demands from it, it must signify a particular empirical content. It must function less like the word "warm" and more like the words "25 degrees centigrade"—that is, it must work with little intersubjective variance. Failing that, one man's reasonable terms may be another's cruel exploitation. There is little doubt, though, that "reasonable" works at best like "nice weather," which can mean anything from crisp and cold to sunny and hot.

Impartiality and Reasonable Rejection

The same or more, alas, is true of such words as acceptable, fair, unforced, equal footing, equal consideration, equitable sharing, and so forth. They are all unabashedly question-begging, in that they rely on a theory of justice (that tells us what is acceptable, fair, or equitable) and consequently cannot help in first constructing one. Yet it is such words that constitute the stuffing in Barry's *Justice as Impartiality*, the second volume of his projected three-volume *Treatise on Justice*. It is of course neither convenient nor necessary always to avoid terms that have no intersubjectively stable meaning at least within a language and a culture, let alone cross-culturally. But inherently vague words and concepts can only build an inherently mushy theory, ill suited to yield rules of justice whose chief function is said to be the avoidance of conflicts (Barry 1995: 12)—least of all if the conflicts are about who gets what, how, and at whose expense.

On the face of it, justice as impartiality is mainly about such concerns as freedom of worship, sexual practices, Salman Rushdie, crash helmets and seat belts, "multiculturalism" and race relations, and not or hardly about property and contract. Yet, the appearance of relative unconcern about what for most people is the central issue in justice is due to "economic" questions being held over for treatment in the forthcoming third volume of Barry's *Treatise*. Much of the treatment is foreshadowed in two essays (Barry 1991 and 1994), and will be taken into account in what follows.

Barry acknowledges a large debt to Scanlon, from whom he borrows unrejectability as the criterion of just arrangements, as well as seemingly innocuous defining features of the hypothetical "original position" that turn out, on inspection, to imply equal bargaining strengths

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and an independently postulated normative solution to the bargain ("not better for some and worse for others"). Following both Rawls and Scanlon, he equates distributive justice with the terms of a hypothetical contract to which all would give unforced assent if they found themselves in the "original position" as specified.

Unanimously accepted terms are liable to be trivial or confined to apple pie-and-motherhood issues. There are two ways of making sure that it is the "right" and nontrivial terms that are accepted. Trusting to belt and braces, Barry uses both. The belt, as we have seen, is to specify that the "original position" is one of equal endowments. From such a position the parties could plausibly be supposed to assent to distributive rules whose consequence is, in effect, equal endowments. If the initial position was accepted and just, rules that *perpetuate it* must presumably also be accepted and just. The rules are rules of impartial justice; they do not favor or penalize anyone relative to their initial position, and are not designed to promote anyone's values. They consecrate the status quo which, praise be, is one of equality that we must on independent grounds deem to be just anyway.

By way of braces, as if the belt were not strong enough, reasonableness is made to do the work all over again. Suppose that, instead of the idealized "original position," bargaining were to start from a position found in nature, entailing all kinds of unequal endowments. Alternative sets of rules are proposed to its denizens who must agree unanimously on one set. Suppose also that certain rules would permit some people to have more of what all want and others to have less. To prevent the adoption of such rules, reasonableness cannot be allowed to retain the vague and indefinite meaning it has in ordinary language and in most of Barry's *Justice as Impartiality*, but must be stiffened (as it is in Barry 1994, and presumably in his forthcoming *Principles of Justice*).

Under this stiffer meaning, that is not found in ordinary language, it is unreasonable for better-placed individuals to reject rules of distribution that do not allow them to be *so much better* placed than they were prior to the agreement. What counts is that this rule would still allow them to be somewhat better placed than others. The only people who *can* reasonably reject a given set of rules are those who are not placed better than anyone else—that is, than whom nobody is placed worse. Every set of rules that allows someone to be placed lower than someone else can reasonably be rejected by the lower-placed party as unjust. As long as anyone gets less than someone else, the rules under which this happens can be rejected; the only stable equilibrium set of just rules is one that *no one can veto*. This condition is fulfilled

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only when no one is worse off than anyone else. This is Barry's first (and only operative) principle of justice (Barry 1994: 67).

Justice as impartiality, then, whether obtained via the "original position" or via a special meaning given to reasonableness, entails equality of valuable endowments and the enforcement of that equality over time. Consequently, this notion of justice is incompatible with property and freedom of contract, institutions that, when combined, are a powerful generator of inequalities over time, and almost certainly a sufficient condition of them.

Justice as Social Choice

Justice as impartiality appears to be a feature, a trait, a distinguishing criterion of a complete state of affairs arranged by society: it is "a sign of an unjust arrangement that those who do badly under it could reasonably reject it" (Barry 1995: 7). Though they *could* reasonably have done so, they *did not* actually reject these arrangements, for if they had, these arrangements could not have come about. Since they did come about, it is up to society to rectify them and make them conform to the norm of reasonableness. Just "institutions should operate in such a way as to counteract the effects of good and bad fortune" (Barry 1991: 142). According to this formulation, impartiality must compensate for inequalities that are not imputable to one's deliberate and free choice. Which choice was deliberate and free is, of course, the whole question. It would seem that a choice by which we accept an arrangement we could have reasonably rejected, is not deliberate and free, but due to pressing need, hence tainted by bad fortune. The test for telling free choice from bad fortune is the reasonableness of what we accept. Impartiality, then, is defined by a substantive norm of reasonableness adopted and applied by society. The question-begging character of the claim that this is the substance of justice stands out clearly enough.

An obvious, and I think quite weighty, objection to Barry's view, as to other views of "justice as something else," is that it confuses the content of the rules of justice with the proper manner of applying them. It is one thing to say that the rules must be applied impartially, fairly, without fear or favor, treating like cases alike—which is of course consistent with the content of the rules being partial to the right, rather than impartial between right and wrong. It is another thing to require the rules to be such as to reduce unlike cases to like ones in an attempt to compensate for fortune, evening out the uneven, on the ground that leaving cases unlike and uneven would not be impartial.

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Casting justice in this role is, in effect, to assimilate it to social choice and to merge the theory of justice into social choice theory. Justice becomes a matter of satisfying a selection criterion or choice rule (e.g., "choose the state of affairs no one can reasonably reject") by which a state of affairs is identified as "just," in the same way as other selection criteria, choice rules, or choice mechanisms identify a state of affairs as socially "chosen" or "preferred." Fairness, unanimity, non-rejection, veto right held by the "dictator" (e.g., the worst-placed individual or group) fit very well into the *modus operandi* of social choice theory.

It is almost as if Barry sensed and sought to carry through, yet also to evade, this conflation of justice with social choice. He energetically protests that his central concern, individual "conceptions of the good," is something quite different from the concern of social choice theory, individual preference orderings: one is a "system of beliefs," the other a "taste for strawberry ice cream" (Barry 1995: 167). But this is nonsense he must not be allowed to get away with. Conceptions of the good, if they are anything intelligible, are hierarchies of alternative states of affairs, ranked according to how good they are conceived to be. The rankings must be sensitive to every non-indifferent trait of a state, according to how well it is liked, approved, or coveted if it is a good trait, and disliked or disapproved if it is a bad one. Why exclude any trait, good or bad, as improper and irrelevant in judging a state of affairs? If the treatment meted out to Salman Rushdie can weigh in the ranking, why can't the availability of various flavors of ice-cream? Complete, comprehensive "conceptions of the good" must, almost by definition, take some account of both, except if the individual concerned is totally indifferent to Salman Rushdie or to ice-cream. So must complete preference orderings, subject to the same exceptions. The two are either indistinguishable,[4] or "conception of the good" is a woolly concept that corresponds to nothing in psychology and in practical reason.

It is fascinating to watch how current theories of distributive justice scuttle back and forth across the line that divides social choice theory into a Paretian or "soft" and a non-Paretian or "hard" version. (In the latter, Pareto-superiority is not necessary for "socially preferring" one state of affairs over another; imposing burdens on one individual

[4]Like many other political philosophers, Barry (1995: 135) is worried that some "conceptions of the good" place a premium on the suppression of the beliefs or modes of behavior of others. He believes that institutions giving effect to such conceptions are illiberal, and are contrary to justice as impartiality. He would therefore require institutions to "filter out" such illiberally other-regarding "conceptions of the good." The same requirement formulated in the language of preferences would have precisely the same effect.

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in order to help another can be "better" than not doing so, while in Paretian theory the two alternatives cannot be ranked.) Rawls's insistence on unanimous consent and on the impropriety of political principles that expect "some citizens . . . to accept lower prospects of life for the sake of others" (Rawls 1971: 178) is Paretian "soft." Yet his difference principle is a "hard," non-Paretian social choice rule that makes some people better and others worse off than they would otherwise be.

Scanlon's rules and institutions, which no one can reasonably reject, can hardly be read otherwise than as Paretian: rejecting an arrangement all would prefer is self-contradictory; rejecting one that is indifferent is contrary to the desire for agreement, but I could no doubt reasonably reject (even if I did not actually reject) one that would burden me for the sake of strangers. Scanlon's theory then moves lock, stock, and barrel over to the "hard," non-Paretian side as it defines reasonable rejectability from an egalitarian original position. (In a just world, we would have equal endowments. I could not reasonably reject arrangements that equalized them. Therefore, it would be unjust to reject them even if I have more and must give some to you.)

Barry, too, is Paretian in his ambition to devise a social choice rule that will be neutral between "conceptions of the good," eschewing the attempt to aggregate them (which would involve the dubious exercise of adding together the positive and negative differences justice as impartiality makes to individuals having different "conceptions of the good").[5] In almost the same breath, however, he defines justice as requiring that better-placed individuals give up some of their valued endowments, or the fruits thereof, in favor of the worse-placed—an overtly non-Paretian, "hard" choice.

This is hardly surprising. In "hard" social choice, almost anything can be advocated without risk of inconsistency; in "soft" social choice, hardly anything can. A theory that was Paretian throughout, and disclaimed any ability to say that as a matter of ascertainable fact,

[5]Barry's test casts some doubts over his own conception of social choice theory. He makes the startling statement that "the Pareto principle is. . .the ordinal form of cardinal utility maximization" (Barry 1995: 135n). It is the nonadmission of interpersonal comparisons that bars utility aggregation and would do so whether or not utilities were cardinally measured. Once the utilities of different individuals are taken to be incommensurate, they cannot be added up. It makes no difference how they are calibrated, ordinally or cardinally: in *either* case, only Paretian comparisons are possible, and aggregate utility maximalization is not. Cardinal apples cannot be added to cardinal oranges, any more than ordinal ones. To say that one is the ordinal, the other the cardinal "form" of utility maximization is, to put it moderately, apt to lead the trusting student into costly errors.

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some forced interpersonal transfers made a state of affairs socially *preferred* or, by a hardly perceptible step from goodness to justice, more *just*, can only see distributive justice as a system of voluntary exercises and transfers of rights. Justice is upheld as far as it can be if voluntariness is safeguarded. It is then *just acts* that make for justice. The conformity of a state of affairs to a social selection criterion—fairness, nonrejectability, or impartiality as defined by the respective authors, or what a majority will vote for, or the dictatorship of the poor—is just that, conformity to the postulated criterion and nothing more. That the criterion is the embodiment of justice rests on no objective evidence, such as is provided by actual (as distinct from hypothetical) agreements to create or transfer rights.

"Pre-Social" Rights and the Lockean Proviso

Acts that are not torts, breach no duty, and respect rights are just. Justice must then be explicated by an independent, noncircular account of torts, duties, and rights. The account must be noncircular in that, unlike fairness or impartiality, it must not rely on some concept of justice to derive justice.

Torts are recognized in immemorial and near-universal cross-cultural conventions that condemn and sanction murder, maiming, trespass, theft, and other offenses against person and property. They are not problematical for the present purpose.[6] Duties are conventionally recognized moral imperatives, and their breaches are conventionally condemned but typically not sanctioned. Unlike obligations, duties do not have the rights of another person as their logical corollary; but neglect of duty is generally taken to disqualify an act from being just. Duties, too, are largely unproblematical for the theory of justice. The ontology of rights and their corollary obligations, however, is more contentious. A plausible and noncircular theory of just distribution stands or falls with a plausible account of rights that does not presuppose some prior account of justice.

Barry (1995: 124) dismisses the idea of "pre-social" or natural rights as preposterous. Though his treatment is a little cavalier, his conclusion is incontrovertible in the somewhat trivial sense that an isolated, extra-social individual cannot have any rights since the exercise of a right by a right-holder requires the fulfillment of the corresponding obliga-

[6]Some torts, notably offenses against property, are rights violations, and the recognition of the right is implicit in the convention that makes its violation a tort. Other torts, however, notably offenses against the person, may be held to be wrong without necessarily supposing that there is a right they violate. It is, I think, not necessary to impute to the person a right to "self-ownership" in order to account for the full system of conventions against torts.

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tion by another person, the obligor. However, it is surely a *non-sequitur* to go from here to the proposition that for rights to exist, "society" must recognize them, hence they are the products of collective choice. This contention, however, is what Barry and his inspirators appear to believe when fashioning theories of justice within a framework of social choice theory.

Revealingly, Barry (ibid.: 205) speaks of property rights being "assigned" to persons without saying who "assigns" them. The underlying suggestion seems to be that society will assign property to persons to the extent that it finds it desirable to let them have "their own toothbrush" and, beyond strictly personal possessions, property representing some area of discretion. Barry makes clear, however, that this area must be neither large nor unequal as between persons.

Society, of course, does not create rights by way of voluntary agreements with itself, except metaphorically as in the social contract. (The creation of rights must be kept conceptually distinct from their enforcement. Whether society enforces rights, or more precisely what part of enforcement services it performs, is contingent on historical accidents and is an altogether different question.) The synoptic view of a set of rights as a product of social choice legitimized by some overall hypothetical agreement contrasts sharply with the more positivist and grassroots view in which each right is created by the assumption of a matching obligation, with value to be given for value received, in a formal or informal contract entered into by a pair of individuals. The contract is not hypothetical or metaphoric, but actual; it may or may not be reasonably unrejectable, but it has not been rejected; both parties would rather have it than not.

There are at least two (and perhaps more than two) ways of looking at such pairwise agreements. One is to find that the agreement, by virtue of being untainted by force, fraud, or unconscionability, is just, since those concerned jointly chose it, rather than something else. By extension, the distributive consequence of the totality of all such agreements, past and present, is a just distribution. The other view is that the agreement was just if and only if the values exchanged or promised under it have been justly come by. The employee acquired a right to a salary by assuming and performing an obligation to work as directed. That his right to be paid for his work is justly acquired does not seem to be in dispute. Any dispute is about the right to his labor acquired by the employer who, endowed with more property that the employee, has greater bargaining power.[7]

[7]We may accept this supposition for argument's sake, though the very meaning of "bargaining power" is unclear, and if it were clear, we would almost certainly find that it is not correlated with property in any simple way.

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Here is the final parting of the ways between justice as a socially chosen trait of a distribution and as a just distribution resulting from the totality of just acts. For the one, unequal bargaining strength is *eo ipso* unjust, and so is any formal right acquired by using it; such rights deserve no respect. For the other, no inequality—whether of bargaining power, property, or any other kind of endowment—is unjust as such, but only if it was brought about by unjust acts. Therefore, if the employer's greater wealth is the result of a chain of voluntary transactions, combined with his own abstinence from consuming capital, no injustice tarnishes it. Barring force and fraud, the only remaining source from which injustice might have sprung is inequality in first possession.

The essentially deontological theory of just acts corresponding to the exercise of rights and the performance of obligations, inspired by John Locke and most lucidly developed by Robert Nozick (1974), which justifies property by working backwards along a chain of voluntary transfers, loses confidence (and much of its consistency) when it arrives at first possession at the end of the chain. It subjects the justice of finding, enclosing, inventing, and thus appropriating valuable resources, to conditions. The chief condition is some form of the Lockean proviso that "enough and as good" must be left for others to appropriate. Nozick shows that in its stringent form the proviso can never be met. He then explicitly assumes that at least the weaker form, which can be met, must be incorporated as a condition in any adequate theory of justice.[8] One can, of course, assume anything, for any reason or none, but the assumption sits ill with the deduction of justice from rights, and of rights from agreements. Where rights must first be created, finding, enclosing, inventing, and appropriating that which was previously unowned is exercising one's liberties, for it cannot violate anyone's rights where *ex hypothesi* there are no such rights. In their absence, it is hard to see why the justice of appropriation of one resource by one person should be dependent on other persons having comparable scope for appropriating other, equally good resources, though of course it would be nice if they did have it. The supposition that they must have it rests on the prior and tacit adoption of some egalitarian moral axiom.

Almost any form of the Lockean proviso can be levered up to a requirement that equates justice with conformity to some general feature of the social state of affairs. Equal initial endowments, or some other broad equality, is the privileged feature. Theories of justice

[8]"I assume that any adequate theory of justice in acquisition will contain a proviso similar to the weaker of the ones we have attributed to Locke" (Nozick 1974: 178).

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can either do this, or they can define justice by reference to individual rights that are independently accounted for. They can hardly do both at the same time.

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The Growth of the Federal Government in the 1920s

Randall G. Holcombe

The federal government has grown substantially in the 20th century. In 1913, just prior to World War I, federal government expenditures were 2.5 percent of gross national product and by 1990 they had risen to 22.5 percent of GNP. The relatively small size of the federal government before World War I shows that it exhibited minimal growth in the 19th century, in stark contrast with its tremendous growth in the 20th century.[1] Figure 1 shows real per capita federal expenditures from 1800 to 1990, and illustrates the difference between government growth in the 20th century and the 19th. A close look at Figure 1 shows a large percentage increase in federal expenditures during the Civil War, followed by a higher level of expenditures after the war, but minimal growth. Real per capita federal expenditures were $79.76 (all figures in 1990 dollars unless otherwise noted) in 1870, and were $79.56 in 1895. Growth in federal expenditures began in the later half of the 1890s, and Figure 1 clearly shows the wartime peaks of World Wars I and II. But the most notable characteristic of this graph of government growth is not the peaks that are associated with wars, but the steady growth throughout the 20th century, in stark contrast to the absence of growth in the 19th century. The goal of this paper is to contribute toward an understanding of government

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[1]The idea that there was minimal government growth in the 19th century is subject to question, especially if government regulation is included in the definition of government. See Hughes (1977), Anderson and Hill (1980), and Holcombe (1992) for discussions of various aspects of 19th century government growth in the United States.

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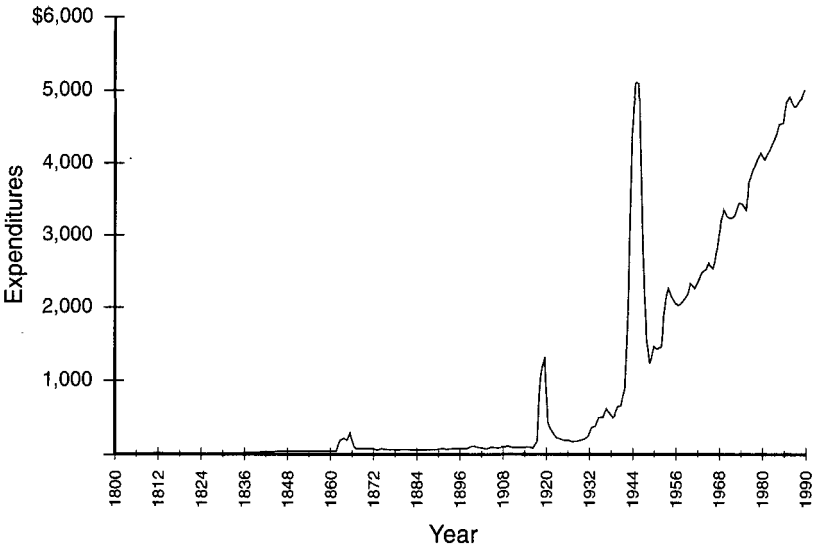
FIGURE 1

REAL PER CAPITA FEDERAL EXPENDITURES: 1800–1990
(In Constant 1990 Dollars)



growth in the 20th century by examining a subset of that century—the 1920s.[2]

The decade of the 1920s is an interesting subject of study for two reasons. First, as Figure 1 shows, government growth in the 1920s was less than in any subsequent decade, so any light shed on growth of government in the 1920s can help illuminate the entire process of government growth. Second, the 1920s fall between two well-known eras of government growth: the Progressive era prior to World War I, and the New Deal of the 1930s. One is tempted to view the 1920s as an era of government retrenchment that, perhaps, would have produced a repeat of the 19th century had it not been for the Great Depression and the New Deal.

The history of the 1920s is often viewed this way (although not by all historians),[3] perhaps because the government of the 1920s is likely

[2]Borcherding (1977: 45–70) examines the growth of the federal government from 1870 to 1970 and concludes that it has grown about twice as rapidly as one might have expected based solely on changes in underlying economic variables. By the same methodology he would surely have found government growing less rapidly than expected during the 19th century.

[3]Wynn (1986: 217) remarks, "Even the view of the Harding administration as 'conservative' is an oversimplification, and one not now generally accepted by historians. The new president

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to be closely associated with the presidents of the 1920s. Warren G. Harding and Calvin Coolidge were major personalities of the 1920s by virtue of being presidents, but one must view the government of the 1920s more broadly than the presidents alone. Even there, however, an examination of the policies promoted by Harding and Coolidge (and President Herbert C. Hoover at the end of the decade) show that they were considerably more sympathetic toward growth in government programs and expenditures than general opinion suggests.[4]

The study of government growth in the 1920s is interesting in its own right, but the conclusions of this study have more significant implications for the process of growth in the surrounding decades, and more generally for the entire process of government growth in the 20th century. Popular opinion often credits (or blames) President Franklin Delano Roosevelt's New Deal for the major increase in federal government growth. This paper shows that the foundations of the New Deal go back to the 1920s and before, and that FDR's initiatives were not a crucial turning point in the growth of American government.[5] As an extension of the trends begun during the Progressive era, the 1920s is not a key decade in the growth of American government, but understanding the government growth of the 1920s is a key element in understanding to process of the growth of the 20th century.[6]

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had adopted a fairly liberal and sympathetic attitude to groups who had been dealt with quite harshly by the previous administration." A more extreme view comes from Anderson (1979: 125–27) who calls 1924 the beginning of the New Deal. Anderson calls the 1924 introduction of the McNary-Haugen bill designed to protect farmers from foreign competition the first piece of the New Deal legislation that continued through Franklin Delano Roosevelt's presidency. (The bill was not actually passed until 1927.) See also Higgs (1987), Johnson (1991), and North (1985), who see changes around the turn of the century as pivotal events in the history of government growth.

[4]Keller (1982) argues the similarities in the policies of Coolidge and Reagan—a similarity Reagan himself tried to draw on. In contrast, Metzer (1985) agrees with the thesis of this paper, arguing that public policy in the 1920s was a continuation of the prewar expansion of the federal government. For a more general treatment of the history of the time as being a part of a transformation to government growth, see Polanyi (1944). Also see Beard and Beard (1930), who approvingly refer to American government as a Leviathan, and even dedicate their book "to the thousands of men and women who loyally serve the public on land and sea under the auspices of the Government of the United States."

[5]In response to the Depression, Roosevelt started many new programs, of which Social Security is the largest survivor. But Roosevelt also abolished many of the programs he started in response to the economic crisis. The Civilian Conservation Corps, the Works Progress Administration, and the National Youth Administration were among the programs that were terminated by FDR.

[6]Wallis (1984) sees a major change in the 1930s as federal government replaced local government as the dominant spending unit, but Metzer (1985), in agreement with the current study, argues that the underlying government growth was present in the 1920s. Other writers, such as Fabricant (1952) and Musgrave and Culbertson (1953) have noted

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The Administrations of Harding, Coolidge, and Hoover

At first glance, it might appear that the three Republican administrations of the 1920s sandwiched between the Democratic administrations of President Woodrow Wilson (1913–21) and President Franklin D. Roosevelt (1933–45) would have brought with them a period of conservatism, in much the same way that Ronald Reagan's election in 1980 might be viewed as a reaction against government growth and activism in the 1960s and 1970s.[7] However, before FDR's administration, the Republicans were the party of government activism and the Democrats the party of conservatism. Furthermore, except for President Wilson's election that was the result of a temporary fracture of the Republican party into Republicans and Progressives, the Republicans, along with Republican ideas, dominated the White House. After Abraham Lincoln's presidency, Grover Cleveland was the only Democrat to hold the office until FDR. The ideas of Progressivism, found mostly in the Republican party, provided the intellectual foundation for the substantial growth of 20th century government.

Another factor relevant to the political environment in the 1920s was the relative balance of power between the president and Congress. During World War I, the balance of power tipped considerably toward the presidency, but the 1920s brought a reduced amount of power to the presidency, and increased the power of the Republican-dominated Congress. After the 1920 elections, Republicans held a majority of 303 to 131 in the House and 60 to 36 in the Senate and, particularly when compared with the previous two decades, the political agenda was more controlled by Congress than by the executive branch.

Without strong presidential leadership or an aggressive presidential agenda, political initiatives from the Congress became oriented more toward special interest programs that generated economic benefits for clearly identified groups, but such initiatives involved an expansion of governmental scope and power.[8] While some programs were eliminated after the World War I, many were not, and the orientation

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the rising trend of government expenditures prior to the New Deal. Kendrick (1955) anticipates the ratchets hypothesis of Peacock and Wiseman (1961) by arguing that wars become bridgeheads for maintaining larger postwar expenditures.

[7]The parallel is noted by Keller (1982).

[8]Murray (1973: 41) says, "Almost by default, the Republican senatorial leadership attempted to speak for the party before Harding's inauguration in 1921." Murray goes on to describe the move toward government programs favoring special interests. As Holcombe (1992) notes, the problem of special interest legislation was well recognized even before the Civil War, and Anderson and Tollison (1991) document the influences of special interests on New Deal expenditures.

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of federal government activities changed substantially. The scope of government increased substantially during the Progressive era and the war, but the 1920s continued pushing the bounds of government. Ellis Hawley (1979: 60) says the administrations of Harding and Coolidge were able to "lend credibility to claims that permanent peace and prosperity were in train and that ways had been found to realize the dreams of the Progressive era while avoiding the evils feared by conservatives." It was not a period of retrenchment, or even of stabilized governmental activity.[9]

The theme of the Harding administration was a "return to normalcy," which must have sounded especially desirable after World War I. This theme was immediately adopted by Coolidge after Harding's death in 1923. One feature of this return, and an indicator of the conservatism of the Harding and Coolidge administrations, was the slashing of income tax rates, which involved considerable congressional debate. But when the income tax was established in 1913, the highest marginal tax rate was 7 percent; it was increased to 77 percent in 1916 to help finance the war. The top rate was reduced to as low as 25 percent in 1925, but that is substantially higher than the 7 percent rate prior to the war, and the income levels that defined the brackets had also been lowered substantially from their prewar levels. The "normalcy" of the 1920s incorporated considerably higher levels of federal spending and taxes than the Progressive era before World War I.

The Progressive movement, and the Progressive party, remained vital through the 1920s, the difference being that the Republicans had been able to regain the support of Progressives. In 1924, the Progressive party ran Robert LaFollette, a Republican Senator from Wisconsin, as their presidential candidate. LaFollette gained a respectable 13 percent of the popular vote. Despite the three-way race, Coolidge still won a 54 percent majority, which contrasts sharply with the 1912 election in which the Progressive party split the Republican vote and led to the loss of the Republican incumbent. Normalcy, in the Harding-Coolidge sense, meant peace and prosperity, but it also meant a continuation of the principles of Progressivism, which enabled the Republican party to retain the support of its Progressive element. Despite the popular view of the 1920s as a retreat from Progressivism, by any measure government was more firmly entrenched as a part of the American economy in 1925 than in 1915, and was continuing to

[9]As Wynn (1986: 219) notes, many of the goals that the Progressives had early in the century had been accomplished by the 1920s, which would naturally lead the movement to lose some of its force.

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grow. Harding and Coolidge were viewed as pro-business,[10] and there may be a tendency to equate this pro-business sentiment as anti-Progressivism.[11] The advance of Progressivism may have been slower than before the war or during the New Deal, but a slower advance is not a retreat.[12]

The Hoover administration, from 1929 to 1933, must be analyzed differently because of the onset of the Great Depression, but compared with his immediate predecessors, it is much easier to make the case that Hoover was an active supporter of increased government involvement in the economy. Hoover served in the Wilson administration as head of the United States Food Administration beginning in 1917 and, as Secretary of Commerce throughout the Harding-Coolidge administrations, was the most active Cabinet member in pursuing increased government involvement in the economy. From 1929 to 1933, under President Hoover's administration, real per capita federal expenditures (graphed in Figure 1), increased by 88 percent. Under President Roosevelt's administration from 1933 to 1940, just before World War II, they increased by only 74 percent. Although Hoover started from a lower base, in percentage terms expenditures under Hoover increased more in four years than during the next seven New Deal years.[13] If a case can be made that federal policies under the Harding and Coolidge administrations were a solidification and extension of Progressive principles, the case is much more easily made for President Hoover's administration.

One might be concerned that looking at the data in real per capita terms makes growth look more substantial than it actually was because it ignores the fact that the 1920s were relatively prosperous years, especially when compared to the 1930s. The picture is not much different if federal outlays are examined as a percent of GNP, however,

[10]One political issue in the 1920s that is often cited as an example of Coolidge's pro-business leanings was his attempt to sell a hydroelectric plant and nitrate plant in Muscle Shoals, Alabama, to Henry Ford. Coolidge was blocked by Congress (Ables 1969: 70–71), and the facility later became the beginning of the Tennessee Valley Authority.

[11]This impression may be furthered by the Progressive elements in the Republican party that continued to oppose Coolidge. See, for example, Hicks (1960: chap. 4).

[12]Harding's Cabinet is viewed by some as the strongest Cabinet in American history. Of the four most prominent members, three—Charles Evans Hughes, Secretary of State; Henry C. Wallace, Secretary of Agriculture; and Herbert Hoover, Secretary of Commerce—were associated with Republican Progressivism. Andrew Mellon, Secretary of the Treasury, was the only major Cabinet officer without Progressive leanings (Hawley 1979: 58–59).

[13]In 1929 real per capita federal expenditures in 1990 dollars were $195.41. They increased to $367.84 by 1933, an 82 percent increase. By 1937, an equal number of years into the Roosevelt administration, per capita federal expenditures were $545.23, only a 48 percent increase, and they had gone up to $638.78 by 1940.

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as Figure 2 shows. As already noted, there is no absolute growth in federal outlays as a percentage of GNP during the 1920s, but there is also almost no growth after 1932, when FDR's New Deal began. The substantial growth in Figure 2 occurred during the Hoover administration. One would not want to argue, based on the aggregate expenditure data shown in Figure 2, that the New Deal was not a period of substantial growth in government, although the data in Figure 2 show little growth during the 1930s. This same reasoning applies to the 1920s. These aggregate data can conceal much, and beg for a closer examination of both the 1920s and the 1930s.

Growth in Federal Spending

Table 1 shows real per capita federal expenditures for the years from 1915 through 1935, which brackets the 1920s by a half decade in each direction. The column next to the year shows total real per capita federal expenditures, which are the numbers for 1915–35 that appear in the graph in Figure 1. The next column shows that total less military, veterans, and interest expenditures, in order to subtract out expenditures directly related to military activity. The relation between military and veterans expenditures is obvious, but in an era

FIGURE 2

TOTAL FEDERAL GOVERNMENT OUTLAYS AS A PERCENT OF GNP: 1920–1940

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TABLE 1

REAL PER CAPITA FEDERAL EXPENDITURES: 1915–1935
(In Constant 1990 Dollars)

Year	Total	Total Minus Defense and Interest
1915	95.02	27.39
1916	83.60	22.75
1917	193.22	113.81
1918	1,067.31	518.37
1919	1,329.77	477.53
1920	390.98	170.15
1921	338.86	136.16
1922	232.95	78.62
1923	214.57	74.49
1924	194.85	70.36
1925	187.78	71.09
1926	184.80	76.57
1927	180.57	72.75
1928	186.56	79.89
1929	195.41	89.30
1930	211.13	101.81
1931	247.41	130.80
1932	286.39	183.98
1933	367.84	231.20
1934	498.88	361.02
1935	486.81	328.03

SOURCE: *Historical Statistics of the United States from Colonial Times to 1970,* and author's calculations.

where government budgets typically were in surplus, interest on the national debt during the 1920s was also almost entirely an expenditure related to the nation's involvement in World War I. Before the war, in 1915, the national debt was $1.2 billion; by 1920, after the war, it had climbed to $24.3 billion.

An examination of the data in Table 1 reveals several things about the growth of federal expenditures during the 1920s. First, nonmilitary expenditures before World War I were substantially less than $30 per capita, and even the lowest year after the war (1924) had nonmilitary expenditures of more than $70 per capita—more than double the level of expenditures before the war. This lends some evidence for the ratchets hypothesis, which suggests that during times of crisis, government expenditures are ratcheted up to deal with the crisis, and

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never fall back down to their prior level after the crisis has passed.[14] However, the table shows more than simply a ratcheting up of government expenditures. Following the ratchets hypothesis, one might expect military expenditures to soar during the war and then decline as nonmilitary expenditures increase. In fact, nonmilitary expenditures soared during the war and declined steeply afterward. Nonmilitary expenditures in 1924 were only 13.6 percent of their peak level in 1918.

The second thing the data in Table 1 suggest is that there are war-related expenditures in the government budget even after subtracting defense, veterans, and interest expenditures. This makes it apparent that one cannot accept nonwar expenditures as unrelated to the war. These expenditures will be analyzed at more length below.

A third thing the data show is that after reaching their lowest postwar level in 1924, government expenditures began a relatively rapid growth. From 1924 to 1929, before Depression-related expenditures would have found their way into the budget, nonmilitary expenditures increased by 27 percent, all during the Coolidge administration. If we take the decline in expenditures up through 1924 as a winding down of the war effort, there appears to be a considerable underlying growth in federal expenditures through the 1920s—growth worth examining more closely. What at first appears to be a relatively stable level of federal expenditures in the 1920s actually is substantial underlying growth, masked by a decline in war-related expenditures.

A fourth matter to consider is the appropriate benchmark for looking at government growth during the 1920s. The growth looks substantial if only the years since 1920 are considered, as just argued, but one could argue that it would be more appropriate to use the prewar year of 1916 as the benchmark; if the 1920s really were a no-growth decade, they should have returned federal spending back to its prewar level. The fact that federal spending always remained at more than double its prewar level does say something about growth in the 1920s, especially as the underlying trend was up.

Finally, Table 1 shows that in percentage terms, the Hoover administration undertook a massive increase in federal spending after the 1929 stock market crash and the onset of the Great Depression. From 1929 to 1933 (the final Hoover budget), nonmilitary federal expenditures increased by 259 percent. Total expenditures increased by a more modest 188 percent during that period because military

[14]This ratchets hypothesis was originally put forward by Peacock and Wiseman (1961), and plays a significant role in discussions of government growth by Rassler and Thompson (1985) and Higgs (1987). While these ratchets undoubtedly exist, Holcombe (1993) casts some doubt on this hypothesis as an explanation of government growth.

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expenditures were, in 1929, more than half of the federal budget. In percentage terms, growth in federal spending in the Hoover administration far outpaced the growth during FDR's administration.

Although a superficial look at the data suggests that the 1920s represent a lull in government growth between the Progressive era and the New Deal, looking at the data in Table 1 more closely raises several interesting issues and reveals that there was a substantial amount of underlying growth in government expenditures in the 1920s. It would be misleading to try to judge the growth of the federal government in the 1920s only by looking at aggregate expenditures. The next several sections look more closely at the decade to discover how government growth manifested itself.

Expenditures by Function

Table 2 takes a more detailed look at federal expenditures in 1920, 1925, and 1930 to identify differences in budgetary growth among various categories of expenditures. The table shows that when the decade is divided in half, the more substantial growth took place in the second half of the decade. General functions, which include the direct expenses of the legislative, judicial, and executive branches of government, remained stable through the first half of the 1920s, but increased by 35 percent in the second half. Similarly, military expenditures, which fell substantially in the first half of the decade up through 1925, increased by 32 percent from 1925 to 1930. The majority of nonfunctional expenditures is interest on the federal debt,

TABLE 2

EXPENDITURES OF THE FEDERAL GOVERNMENT BY FUNCTION: 1920, 1925, AND 1930
(Thousands of 1930 Dollars)

	1920	1925	1930
General functions[a]	18,953	18,932	25,642
Military functions[b]	1,966,358	1,099,711	1,455,093
Civil functions less trans.	426,964	504,891	775,298
Transportation	1,281,878	90,035	87,029
Non-functional[c]	1,453,747	1,369,446	1,315,742
Total	5,147,900	3,083,016	3,658,804

[a]General functions are legislative, judicial, and executive expenditures.
[b]*Military functions include military pensions.*
[c]Non-functional expenditures include interest on the debt, investments, refunds, and deposits into trust funds.
SOURCE: Author's calculations from data in Wooddy (1934: 545–46).

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and that category is relatively stable. The civil functions category is of most interest for current purposes.

Carroll Wooddy (1934) breaks civil functions down into 20 categories, including land transportation and marine transportation. Table 2 lists them separately because changes in these two transportation categories so overwhelm the civil functions category. In 1920 there was a considerable wartime component to the transportation category because of the Merchant Fleet Corporation, which was established to aid in merchant shipping during the war, and because of the nationalization of the railroads during the war. Another major area of marine expenditures was the Coast Guard, which had substantial expenses associated with Prohibition. Because of wartime expenditures and Prohibition, the trends in marine transportation expenditures are not representative of government growth in general.

Civil functions less transportation in Table 2 show relatively modest growth of only 18 percent from 1920 to 1925. From 1925 to 1930, in contrast, civil functions less transportation grew by 54 percent. Part of the reason for the relatively modest growth in the first half of the decade is that increases in some areas were offset by decreases in war-related civil expenditures in other areas. That is easy to document in the transportation category, but is more difficult to see in other categories.[15] Federal relief, for example, declined from $48 million in 1920 to $3.5 million in 1930, undoubtedly because most relief expenditures in 1920 were war-related.[16] But other areas increased substantially over the decade, and deserve a closer look.

Table 3 lists a few areas that saw significant increases in federal expenditures over the 1920s. Those areas are all subsets of the civil functions less transportation category from Table 2; the final row in Table 3, % of Civil less Trans, shows the percentage of that category in Table 2 that is made up of all of the categories in Table 3. Thus, in 1920, the categories of Table 3 are 36.5 percent of civil functions less transportation in Table 2, with the percentage increasing to 66.2 percent in 1925 and declining slightly to 62.7 percent in 1930. The last number in the Total row shows that taken together, these categories were 3.12 times as large in 1930 as they were in 1920. The substantial growth in these categories was partially offset by declines in some other categories, because the Table 2 category was only 1.82 times as large in 1930 as in 1920. That suggests that the categories

[15]One category, listed by Wooddy (1934: 545) under "general and financial administration" as a subset called "other," declined from $8,672,000 in 1920 to $601,000 in 1930. One must suspect that there are significant war-related expenses in this "other" category.

[16]The total for 1925 was only $65,000.

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TABLE 3

EXPENDITURES OF THE FEDERAL GOVERNMENT, SELECTED FUNCTIONS: 1920, 1925, AND 1930

	Thousands of 1930 Dollars				Annual Growth
	1920	1925	1930	1930/1920	Rate (%)
Law enforcement	10,375	24,246	51,537	4.97	17.5
Public domain	15,402	24,994	37,789	2.45	9.4
Commerce	8,077	14,393	27,354	3.39	13.0
Agriculture	16,644	26,273	48,824	2.93	11.4
Labor interests	2,065	4,641	6,863	3.32	12.8
Immigration	2,953	5,541	9,512	3.22	12.5
Public education	5,405	10,483	14,295	2.64	10.2
Public improvements	73,481	183,411	241,387	3.29	12.7
Territorial and local govt	19,964	38,228	46,367	2.32	8.9
Total	155,965	334,044	485,838	3.12	
% of Civil less Trans	36.5	66.2	62.7		

SOURCE: Author's calculations from data in Wooddy (1934: 545).

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omitted from Table 3 may reflect declines in war-related expenditures, although other factors may also have been at work.

The second column from the right in Table 3 gives the 1930 expenditure level divided by the 1920 level, so law enforcement expenditures in 1930 were 4.97 times as large in 1930 as in 1920. The rightmost column gives the growth rate over that decade, so law enforcement expenditures grew at a 17.5 percent annual rate from 1920 to 1930. These categories cover nearly two-thirds of the civil functions less transportation from Table 2, so they make up a significant component of nonmilitary federal expenditures. The table shows that their average annual growth rates were very high, so the categories in Table 3 give some indication of where to look for government growth in the 1920s.

Law enforcement expenditures were almost five times as large in 1930 as in 1920, and much of this is related to Prohibition. Agricultural expenditures, which had an average annual growth rate through the 1920s of 11.4 percent, are discussed further below. Immigration and naturalization expenditures more than tripled, partly representing greater selectivity in admitting immigrants. Immigration was sharply down in 1915 due to World War I, and legislation passed in 1917 restricted immigration after the war. In 1924 immigration quotas were established, further adding to immigration and naturalization expenditures (Wooddy 1934: 300–91).

Federal expenditures on public education also increased substantially during the 1920s, funding programs such as land grant colleges and federal subsidies for vocational education. These expenditures were undertaken by grants to the states, but the federal government also contributed significant sums directly to some educational institutions, including Howard University and Columbia Institution for the Deaf. The Library of Congress also falls within the education category, and in 1930 accounted for $2.3 million of the $14 million education category. Two features of educational expenditures are relevant to the consideration of federal growth in the 1920s. First, education, which even in the late 20th century would normally be considered to be an activity undertaken by the states, had considerable and rapidly growing federal involvement in the 1920s. Second, much of the federal government's expenditures involved grants to the states, leading to more federal financing and more federal control in areas traditionally administered by state governments.

Public domain expenditures include the Department of the Interior expenses to manage public lands and national parks, the Federal Power Commission, whose expenditures were largely related to hydroelectric projects, and the Forest Service, which was a part of the Department of Agriculture. About 70 percent of the public domain expenditures

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in Table 3 are Forest Service expenditures, which went primarily for the construction of roads and trails, and for grants to state governments to aid in their managing of public lands, including road building and fire protection.

The Secretary of Commerce through the Harding and Coolidge administrations was Herbert Hoover, whose department shows remarkable 13 percent growth rate through the 1920s, more than tripling in size. By 1930 about one-third of commerce expenditures were due to aviation, but that still leaves a substantial amount of the budget for non-aviation related expenditures. The expenditures of the Patent Office increased substantially, as did the Bureau of Foreign and Domestic Commerce, which had as one of its main goals the promotion of American goods to foreign purchasers. Expenditures more than doubled in the Radio Commission and the Tariff Commission also. Increased expenditure and activity in the Department of Commerce through the 1920s may reflect the growth of commerce during that prosperous decade, but those expenditures grew under the guidance of Secretary Hoover, lending some insight into Hoover's vision of government that would be applicable to evaluating his presidential administration.

The substantial increase in expenditures on labor interests cannot be assigned to a dominant area, because those expenditures primarily represent the Department of Labor budget, which included a diverse set of activities. The Bureau of Labor Statistics and the United States Employment Service primarily provided information. The United States Board of Mediation helped to settle labor disputes. The United States Housing Corporation was created in 1918 to help facilitate the construction of housing in areas of critical wartime production, but, despite its wartime motivation, lasted into the 1930s. The Harding and Coolidge administrations had a pro-business reputation, but expenditures on labor-related activities soared during the 1920s.

All these areas might be explored in more detail, but this examination illustrates the primary point that after omitting expenditures that are clearly related to World War I, there was substantial growth in underlying civilian federal expenditures in the 1920s. The next several sections select a few specific areas of government activity that have special relevance to the nature of government growth in the 1920s.

Government-Owned Corporations

One of the methods by which the government has expanded beyond its traditional bounds in the 20th century is the establishment of government-owned corporations. The first wholly owned federal corporation was the Bank of the United States, chartered by an act of

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Congress in 1791. But after the charter of the Second Bank of the United States expired in 1836, another publicly owned corporation was not formed until 1904, to build the Panama Canal.

The next federally owned corporation was the Merchant Fleet Corporation, established in 1917 as a part of the war effort. After the war, the Merchant Fleet Corporation remained in business through the Great Depression, losing phenomenal sums of money over the decade of the 1920s.[17] Throughout the 1920s there were protests from members of Congress that the Corporation was being run inefficiently, and that it was unnecessary and a government-subsidized competitor of privately owned U.S. shippers. The corporation remained in business, however.

Also in 1917 the Food Administration Grain Corporation was established to help finance the sale of American wheat to Europe, and pushed the frontiers of public corporations because its purpose was to aid private businesses (in this case, farms) in selling their products, although admittedly in a manner related to the war effort. In 1918 the War Finance Corporation was established to help key industries borrow funds and pushed the frontiers even further. The War Finance Corporation aided businesses more generally, and in 1921, well after the war, its charter was extended so that it could undertake more general types of lending activity, including the making of agricultural loans. The War Finance Corporation continued in business through 1931.

Federally owned corporations, a rarity only a few years prior, began to proliferate in the late teens. The Federal Land Bank was established in 1917, and the Sugar Equalization Board, the United States Housing Corporation, and the Spruce Production Corporation were created in 1918. The war effort provided some impetus to these corporations, although some had a tenuous connection with the war, and in any event the war ended in 1918. If the corporations were intended to help win World War I, they could have been dismantled after the war, but the corporations persisted and provided a model for government growth that continued through the 1920s.

In 1923 the Agricultural Credits Act created 12 federally owned banks to make agricultural loans. The Inland Waterways Corporation was created in 1924 to operate boats and barges on the Mississippi River. In 1929 the Federal Farm Board was created to support the prices of agricultural products. The use of public corporations to further the federal government's goals did not begin during World

[17]The Merchant Fleet Corporation was originally established under the name United States Shipping Board. Additional details on its operation are given in Beck (1932).

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War I, but the late teens were transition years during which the government created more federally owned corporations than had ever been created previously. For the most part, they were not dismantled after the war, but rather remained and became models for additional federally owned corporations that were established in the 1920s. Paul Johnson (1991: 17) argues, "The war corporation of 1917 began one of the great continuities of modern American history, sometimes underground, sometimes at the surface, which culminated in the vast welfare state which Lyndon Johnson brought into being in the late 1960s." Johnson's observation implies that the 1920s were a part of the continuing process of 20th century growth, rather than a "return to normalcy" falling between the Progressive era and the New Deal.

The goals of those corporations are significant. They were not formed to enhance national security, or to protect the rights of individuals, but to provide economic assistance to a subset of the U.S. population. The programs were small in scale when compared with the New Deal, but they were large in scale when compared with federal programs before World War I, and they were built on the philosophy that the federal government has a direct role to play in enhancing the economic well-being of Americans. The New Deal changed the scale of federal programs when compared to the 1920s, but did not change the underlying philosophy.

Federal Aid to States

Federal aid to states was relatively small through the 1920s, but grew relatively rapidly. In 1915 federal aid to states was $6 million, and had increased to $109 million by 1930. Though small in amount (with 48 states, the average state would have received $2.3 million), the percentage increase was substantial, and federal aid rose to $198 million in 1931 and $234 million in 1932. In examining the growth of the federal government from 1915 to 1932 Wooddy (1934: 552) concludes, "There seems little doubt that the development of this device for permitting federal participation of the activities of state and local governments contributed substantially to the growth of the period." For present purposes, the magnitude is not of as much interest as the precedent.

The Post Office

The establishment of post offices and post roads is one of the activities of the federal government explicitly given in the Constitution. By charging for its services, the Post Office has been able to operate in a relatively businesslike manner, even though it was not, until recently, a publicly owned corporation. Through 1851 the Post Office

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operated under an implied balanced budget constraint, but legislation in 1851 specifically prevented the Post Office from diminishing any of its existing services while encouraging continued expansion. In 1857 and 1858 the Post Office established new routes to the Pacific costing considerably more than the revenues they generated (Kelly 1932: 63–65). The 1850s marked the beginning of a postal policy designed to keep rates low to expand its service, which it was able to do thanks to the backing of the federal Treasury.

While postal deficits were not uncommon, in the years before World War I the Post Office was able to roughly balance its budget; it showed a substantial surplus during the war years. The apparent financial success of the Post Office during the war years was bolstered by two factors. First, much mail was carried by the military during the war, and second, postal rates were increased during the war. But military assistance in carrying the mail never reduced the expenditures of the Post Office. In 1915 the Post Office spent $299 million, and with increases every year, expenditures were $454 million in 1920.[18] Despite some cost advantages due to the war, the Post Office delivered all mail of military personnel without postage, and began selling war-savings certificates in 1917, adding to its responsibilities. More than 80 percent of the war-savings certificates were sold through post offices.

In the Wilson administration, Postmaster General Albert Burleson, appointed in 1913, ruled the Post Office with a heavy hand, trying to do away with unions and increase the efficiency of the Post Office by controlling costs.[19] Burleson's explicit goal was to have the Post Office operate at a surplus (Kelly 1932: 83), and he succeeded. In 1917 postage for first class letters was increased to 3 cents, and for post cards to 2 cents, increasing Post Office revenues, but in 1919 the increases were reversed, which created substantial losses for the Post Office.

Postmaster General Burleson was not popular with postal employees and, after Harding's election, several Postmasters General were appointed who were considerably more sympathetic to postal employees than Burleson. But under President Harding, postal expenditures increased tremendously. Expenditures of $454 million in 1920 were followed by expenditures of $621 million in 1921 and a huge postal deficit. Although expenditures fell to $546 million in 1922, they were still 20 percent higher in 1922 than in 1920, and the Post Office

[18]Figures on postal expenditures are from Wooddy (1934) unless otherwise noted.

[19]One effect of Burleson's tenure as Postmaster General was to reduce morale among postal employees. See Cullinan (1968: 124–40) for a discussion of Burleson's tenure as well as those who succeeded him during the Harding administration.

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showed a deficit every year after 1919, when the rates were lowered to their prewar levels.

Despite the lowering of rates, in 1920 the salaries of letter carriers were raised from $1,400 a year to $1,800, and were raised again in 1924 to $2,100. Harding's first Postmaster General, Will H. Hayes, explicitly stated that the Post Office did not exist to make a profit, but rather to provide service. Further, Hayes wanted to "humanize" the postal industry, arguing that labor is not a commodity. The result was not only higher wages, but an expansion in the role of the Post Office. It expanded rural free delivery and established more city delivery offices. The Post Office also issued many more money orders and increased its sales of savings bonds (an activity that began in 1917 and continued through 1931). As Wooddy (1934: 270) notes, postal deficits in the 1920s were caused by the expansion of postal services and the provision of many services without charge or considerably below cost.

The deficits in the 1920s might be looked at as a return to the idea that, because of the Post Office's service to the public, postal deficits should not be considered objectionable. However, that approach is in stark contrast to Postmaster Burleson's ideas under the Democratic Wilson administration. Burleson's ideas were more in line with the contemporary vision of limited government and bureaucratic accountability and were the status quo for eight years under President Wilson. If the Harding-Coolidge administration was a return to limited government, it could have continued President Wilson's businesslike approach. The Post Office under the Harding-Coolidge administration shows a turn away from the conservative principles in the Wilson administration and a turn back toward the Progressivism that preceded it.

Prohibition

Prohibition corresponds almost exactly to the Republican administrations of Harding, Coolidge, and Hoover. After the passage of the 18th Amendment to the Constitution, Prohibition became effective in 1920 and continued until it was repealed in 1933 by the 21st Amendment. While Prohibition itself slightly predates the Harding administration, the way in which it was enforced was a function of the executive branch of government. Enforcement really goes back to the Harrison Act of 1914, which regulated the use of narcotic drugs. Because taxes were supposed to be paid on legal narcotics, the enforcement of the Harrison Act was undertaken by the Bureau of Internal Revenue, within the Treasury Department. Because there

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were also limited legal nonbeverage uses for liquor, the Bureau of Internal Revenue also was charged with enforcing Prohibition.

Expenditures to enforce Prohibition extended beyond the Bureau of Internal Revenue, because the Customs Service, Coast Guard, and Department of Justice were also involved. As Table 3 shows, federal law enforcement expenditures increased by nearly 400 percent in the 1920s, more than doubling from 1920 to 1925, and then more than doubling again from 1925 to 1930. However, while there may be some debate about how costs of agencies like the Coast Guard and the Department of Justice should be associated with Prohibition, it is interesting to note how rapidly expenditures of the Bureau of Internal Revenue were affected.[20] In 1920 a Prohibition Unit was established in the Bureau of Internal Revenue, and in 1927 a separate Bureau of Prohibition was created within the Treasury Department. The Treasury's Prohibition-related activities were obviously not intended to generate revenue, as Table 4 shows. In no year did Treasury collect more revenues from enforcement of Prohibition than it expended in

TABLE 4

TREASURY REVENUES AND EXPENDITURES FROM ENFORCEMENT OF PROHIBITION
(Thousands of Current Dollars)

Year	Revenues	Expenditures
1920	1,149	2,060
1921	4,571	6,301
1922	4,356	6,544
1923	5,095	8,135
1924	6,538	7,509
1925	5,873	9,203
1926	5,647	9,573
1927	5,162	11,685
1928	6,184	11,610
1929	5,475	12,328
1930	5,357	13,507
1931	4,138	9,624
1932	3,954	11,058

SOURCE: Wooddy (1934: 101).

[20]The Coast Guard's own figures on the subject show that more than half its budget during the 1920s, amounting to about $15 million a year, went toward enforcing Prohibition (Schmeckebier 1929: 14). The Justice Department estimated that about one-third of its budget, or about $10 million, would be spent enforcing Prohibition in 1930 (ibid.: 308).

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enforcement activities. This does not include expenditures undertaken by the Justice Department, Customs, or the Coast Guard.

The revenues in Table 4 include fines, penalties, and taxes collected as a result of enforcing Prohibition, and the expenditures include only Department of Treasury expenditures. Note that revenues are never higher than in 1924, when they still fall short of expenditures by about $1 million, but expenditures continue to increase substantially up through 1930. Those expenditures probably represent less than one-third of total Prohibition-related federal expenditures. The government's powers related to Prohibition expanded as rapidly as its expenditures, and the creation of a separate Bureau of Prohibition was an initiative of the Coolidge administration to better enforce Prohibition. That is yet another area in which government expanded its powers during the 1920s, and did so with the approval of the Coolidge administration.

Agriculture

In the 1920s American agriculture did not fare as well as American industry, creating the impression of an agriculture versus industry antagonism, and the impression that the Harding and Coolidge administrations favored industry over agriculture.[21] Much of the blame for agricultural problems must be placed on increased worldwide production, creating a glut on world markets. The industry could have been allowed to adjust to market conditions, creating more transitionary hardship among farmers, but it was not. With regard to government policy in the 1920s, tariffs on farm products were passed by Congress in 1921, the Capper-Volstead Act was passed in 1922, exempting agricultural cooperatives from antitrust laws, and in 1926 the Division of Co-operative Marketing was set up in the Department of Agriculture with the warm endorsement of President Coolidge (Hicks 1960: chap. 9). The Agricultural Credits Act of 1923 made it easier for farmers to get intermediate credit from the Federal Farm Loan Board.

Looking at the facts, one has to conclude that government intervention for the assistance of the agricultural industry was significant in the 1920s, and in no case was any government protection or assistance taken away from farmers. But farmers wanted more than they got from President Coolidge. After much debate and substantial controversy, the McNary-Haugen bill passed Congress in 1927, which would provide government support prices for agricultural commodities. Coo-

[21]This impression was accentuated by Andrew Mellon's relative prominence as Secretary of the Treasury, a position he held through the Harding and Coolidge administrations. Ables (1969) calls the Harding-Coolidge administrations the rule of Mellon.

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lidge vetoed the bill, but it was redesigned and passed again the next year, and again vetoed by Coolidge. After Hoover's election, the Agricultural Marketing Act of 1929 was passed, creating a Federal Farm Board with the power to buy and store "any quantity" of agricultural commodities for the purpose of supporting prices.[22]

The government did not treat farmers as generously as they wanted to be treated in the 1920s but, despite the "industry versus agriculture" impression that some historians have of the period, the 1920s saw no reversals of government policy to aid agriculture, and a substantial growth in new agricultural policies. Benjamin Anderson (1979: 125–27) has argued that the original introduction of the McNary-Haugen bill in 1924 marks the true beginning of the New Deal. From 1924 on, legislation was increasingly designed to help control the economy and to support the economic interests of well-defined interest groups, and farmers were major beneficiaries. As Table 3 showed, in 1920, federal expenditures on agriculture were $17 million (in 1930 prices), and had increased by 193 percent to $49 million by 1930. Whether evaluated financially or with regard to programs, the 1920s saw considerable government growth in the agricultural industry, and laid the foundation for more federal involvement that was to follow in the New Deal.

Antitrust

Expenditures are the easiest measure of the size of government, but tell only a part of the story of government growth. Government regulation also has a substantial impact, but is harder to measure.[23] Starting with the Sherman Act in 1890, the federal government began its antitrust activity to try to limit the economic power of businesses. Only 22 cases were brought before 1905, but the pace started picking up later in that decade, which saw 39 cases brought between 1905 and 1909. From 1910 to 1919, a total of 134 cases were brought, showing increasing antitrust enforcement. But there was little slowdown in the 1920s, which saw a total of 125 cases.[24]

As Thomas McCraw (1984: 145) notes, "By the 1920s antitrust had become a permanent part of American economic and political life." One might anticipate, after an increase in cases, that firms would be more cautious in their activities to avoid antitrust cases being brought

[22]See Hicks (1960: 196–218), and for a discussion of Hoover's role in agricultural policy both during his and Coolidge's administration, see Horowitz (1984).

[23]Shughart and Tollison (1986) show a tremendous increase in bills introduced into Congress (and a less dramatic increase in laws enacted) before the 1920s, providing another indicator of the growth of government.

[24]These statistics are from Posner (1970: 376).

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against them. But McCraw (1984: 146) further notes that in the 1920s a large proportion of antitrust cases were brought against firms that were not normally regarded as being highly concentrated. Antitrust enforcement in the 1920s was vigorous and increasingly broad in scope. Antitrust enforcement is another dimension in which the federal government was exercising increased power in the 1920s, despite the conventional wisdom of the 1920s as a decade friendly to business.

Academic Influences

In a famous passage, J. M. Keynes (1936: 383) remarked, "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else." Reinforcing the ideas of Progressivism, the academic concept of scientific management was gaining currency early in the 20th century and enhanced the interface between academic institutions and public policy. The creation of the National Bureau of Economic Research, which owes its origin to the Progressive technocratic reform movement that wanted to use government to improve the economy's ability to produce and distribute income, was one manifestation of an increasing influence of academic institutions on government.

With private funding, and support from both the public and private sector, the NBER was established in 1920 with Wesley Clair Mitchell as its first director. Mitchell's goal was "to organize the bureau's research program around questions that were, first, of primary social importance, and second, capable of the statistical resolution needed to surmount social science's internal crisis of scientific legitimacy" (Alchon 1985: 59). The NBER worked closely with the Department of Commerce, and Secretary Hoover was very much interested in making the government more actively involved in economic policy. Indeed, many of the new Keynesian ideas of the 1930s were a part of the accepted wisdom of American economists in the 1920s (Davis 1971). The 1920s saw an alliance of academic institutions, private foundations, and government to create organizations like the NBER that furthered the scientific aspects of social science and provided data and ideas for government management of the economy.

Conclusion

The 1920s, falling between the Progressive era and the New Deal, and directly following World War I, may appear as a decade of stable government sandwiched between major episodes of government growth. In some sense, this is true. Government expenditures were

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declining dramatically from their peak levels during the war, and Calvin Coolidge, president during most of the decade, was not acting aggressively to expand the scope of government. But in other ways, the 1920s was a decade of increasing government activity, in expenditures, in regulation, and in attitude, as the federal government was increasingly willing to expand its role in the economic lives of its citizens. Indeed, the foundation for the New Deal was established in the 1920s, and it certainly would be wrong to conclude that were it not for the New Deal, government would have remained more confined later in the 20th century. The New Deal was really an extension of the type of government growth that occurred in the 1920s.

Were it not for the Great Depression, government growth would have been slower in the 1930s than it was, because there would have been no call to respond to a national economic crisis. But government was expanding its programs, its powers, and its budget during the 1920s in the relatively passive presidential administration of Calvin Coolidge, as a part of the trend of government growth that had begun with the Progressive era around the turn of the century. If the trends of the 1920s had continued, federal government growth would have been substantial with or without the Great Depression and with or without the New Deal. For Coolidge, being pro-business did not mean being anti-government (or anti-labor, or anti-agriculture), and Coolidge supported the expansion of government in almost every area, although not to the degree desired by some of his critics.

The point of this paper is to try to shed some light on the remarkable phenomenon of government growth in the 20th century that is illustrated in Figure 1. By looking at the decade before the New Deal, this paper shows that it was not the New Deal or the nation's response to the Great Depression that triggered the growth of the federal government. The seeds were sown in the Progressive era prior to World War I, and the 1920s served to reinforce those principles of government established during the Progressive era by continuing to expand the government's reach. The 1920s did not represent a plateau in government activity that was reversed by the New Deal; rather, the foundations for the New Deal were established by the increasing scope of federal government activity during the 1920s.

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The Lessons of China's Transition to a Market Economy

Justin Yifu Lin, Fang Cai, and Zhou Li

China's transition from a planned economy to a market economy began at the end of 1978. When China started the process, the government did not have a well-designed blueprint. The approach to reform can be characterized as piecemeal, partial, incremental, and often experimental. Some economists regard this approach as self-defeating (Murphy, Schleifer, and Vishny 1992). China's average annual rate of GDP growth has been miraculous since the beginning of the transition (Lin et al. 1996) and is the most successful of the transition economies. Nevertheless, the Chinese economy has been troubled by an increasingly serious "boom and bust" cycle (see Figure 1).

Whether China's experience provides useful lessons for other transition economies is hotly debated. Some economists argue that China's success demonstrates the superiority of an evolutionary, experimental, and bottom-up approach over the comprehensive and top-down "shock therapy" approach that characterizes the transition in Eastern Europe and the former Soviet Union (Jefferson and Rawski 1995; McKinnon 1994; McMillan and Naughton 1992; Singh 1991; Chen et al. 1992; Harrold 1992; Perkins 1992). Other economists argue that it is neither gradualism nor experimentation but rather China's unique initial conditions—namely, a large agricultural labor force, low subsidies to the population, and a rather decentralized economic system—that have contributed to China's success (Woo 1993; Sachs and Woo 1993; Qian and Xu 1993). According to these economists, China's

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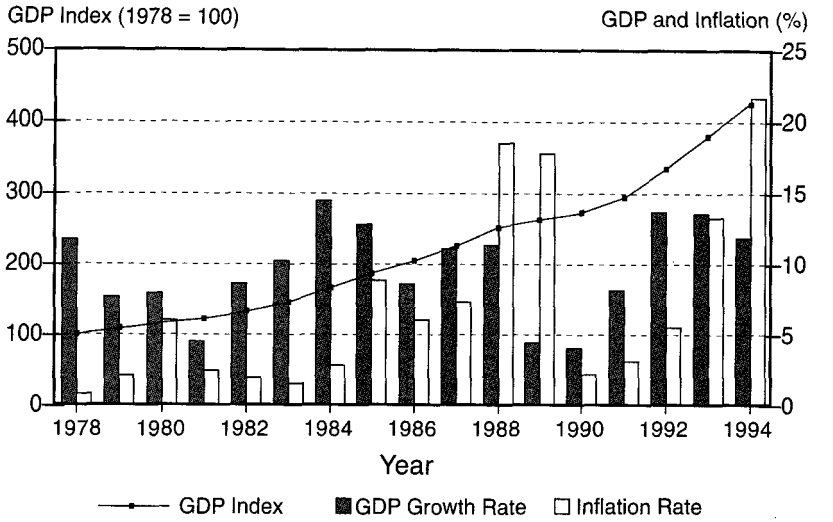
FIGURE 1

ECONOMIC GROWTH AND INFLATION IN CHINA



SOURCE: State Statistical Bureau (1995: 4, 8, 45).

experience has no general implications because China's initial conditions are unique.

In this paper, we offer a new perspective on the debate. Whether or not China's experience provides useful lessons depends on whether the nature and cause of the problems that China and other transition economies attempt to solve are similar. We argue that the system of central economic planning and its related problems in the transition economies have the same root—namely, the attempt to pursue a capital-intensive heavy-industry-oriented development strategy when the economy is constrained by capital scarcity. Therefore, China's approach to reform provides useful lessons for other transition economies. Moreover, we show that the "boom and bust" cycle in the Chinese economy is the result of institutional incompatibility arising from the piecemeal and partial approach to reform. To obtain a sustained, smooth growth, it is imperative for China to complete the transition from the planned economy to a market economy. China must shift from a traditional anti-comparative-advantage, heavy-industry-oriented development strategy to a strategy that relies on the economy's comparative advantages.

The paper is organized as follows: first, we discuss China's economic development strategy before the reforms and present a simple economic model to analyze the problems associated with that strategy.

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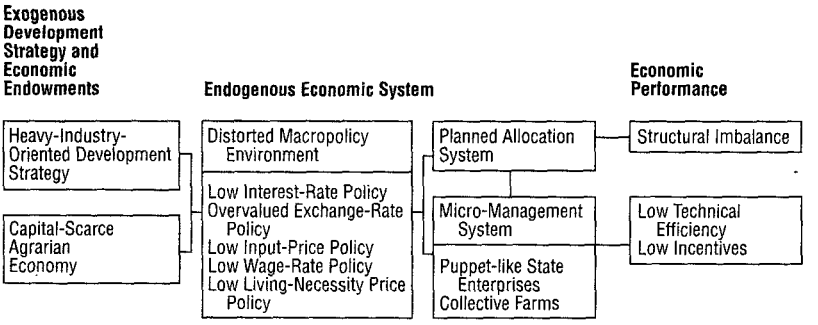
Second, we provide an analytical review of China's reforms. Third, we compare China's approach to reform with the "big bang" approach. In the final section, we present some concluding remarks.

The Major Prereform Problems in the Chinese Economy

The traditional planned economic system in China was shaped by the adoption of a heavy-industry-oriented development strategy (HIODS) in the early 1950s. The system had three integrated components: (1) a distorted macropolicy environment that featured artificially low interest rates, overvalued exchange rates, low nominal wage rates, and low prices for living necessities and raw materials; (2) a planned allocation mechanism for credit, foreign exchange, and other materials; and (3) a traditional micromanagement institution of state enterprises and collective agriculture. These three components were endogenous to the choice of a capital-intensive HIODS in a capital-scarce agrarian economy, although the specific institutional arrangements adopted in China were also shaped by socialist ideology, the Chinese Communist Party's experience during the revolution, and the Chinese government's political capacity of pursuing its intended goals.[1] The relation between the development strategy and the economic system is summarized in Figure 2.

FIGURE 2

FORMATION OF THE TRADITIONAL ECONOMIC SYSTEM IN CHINA



[1]Perkins and Yusuf (1984: 4) noted that a unique feature of China's economic development under socialism was the government's capacity to implement village-level programs nationwide through bureaucratic and Party channels. Therefore, the Chinese government was able to impose certain institutional arrangements in the economy, deemed important by ideology or by economic rationality, which may not be feasible in other economies (Perkins 1966).

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At the founding of the People's Republic in 1949, the Chinese government inherited a war-torn agrarian economy in which 89.4 percent of the population resided in rural areas and industry consisted of only 12.6 percent of the national income. At that time, a developed heavy-industry sector was the symbol of the nation's power and economic achievement. Like government leaders in India and in many other newly independent developing countries, Chinese leaders had the motivation of accelerating the development of heavy industries. After China's involvement in the Korean War in 1950, with its resulting embargo and isolation from Western nations, catching up to the industrialized powers also became a necessity for national security. In addition, the Soviet Union's outstanding record of nation building in the 1930s, in contrast to that of the Great Depression in Western market economies, provided the Chinese leadership with both inspiration and experience for adopting a HIODS. Therefore, after recovering from wartime destruction in 1952, the Chinese government set heavy industry as the priority sector of economic development. The goal was to build, as rapidly as possible, the country's capacity to produce capital goods and military materials. This development strategy was implemented through a series of Five-Year Plans.[2]

Heavy industry is a capital-intensive sector. The construction of a heavy-industry project has three characteristics: (1) it requires long gestation;[3] (2) most equipment for a project, at least in the initial stage, needs to be imported from more advanced economies; and (3) each project requires a large lump-sum investment. When the Chinese government initiated that strategy in the early 1950s, the Chinese economy had three characteristics: (1) capital was limited and the market interest rate was high;[4] (2) foreign exchange was scarce and expensive because exportable goods were limited and primarily consisted of low-priced agricultural products; and (3) the economic surplus was small and scattered due to the nature of a poor agrarian economy. Because these characteristics of the Chinese economy were mismatched with the three characteristics of heavy industry projects,

[2]The Five-Year Plan was disrupted from 1963–65, the period immediately after the agricultural crisis of 1959–62. The First to the Seventh Five-Year Plans covered, respectively, the periods from 1952–57, 1958–62, 1966–70, 1971–75, 1975–80, 1981–85, and 1986–90.

[3]The construction of a light-industry project, such as a small textile factory, takes one or two years to complete. The construction of a large heavy-industry project, in general, takes a much longer time. For example, in China the average construction time for a metallurgy plant is seven years, for a chemical plant is five to six years, and for a machine-building plant is three to four years (Li and Zheng 1989: 170).

[4]A real interest rate of 3 percent per month (36 percent per year) was normal in the informal financial markets that existed before the adoption of the development strategy.

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spontaneous development of capital-intensive industry in the economy was impossible.[5] Therefore, a set of distorted macropolicies was required for the development of heavy industry.

At the beginning of the First Five-Year Plan, the government instituted a policy of low interest rates and overvalued exchange rates to reduce the costs both of interest payments and of importing equipment.[6] Meanwhile, to secure enough funds for industrial expansion, a policy of low input prices—including nominal wage rates for workers[7] and prices for raw materials, energy, and transportation—evolved alongside the adoption of this development strategy. The assumption was that the low prices would enable the enterprises to create profits large enough to repay the loans or to accumulate enough funds for reinvestment. If the enterprises were privately owned, the state could not be sure that the private entrepreneurs would reinvest the policy-created profits on the intended projects.[8] Therefore, private enterprises were soon nationalized[9] and new key enterprises were owned

[5]Spontaneous development of heavy industry was impossible for several reasons. First, high interest rates would make any project that requires a long gestation unfeasible. For example, it takes on average seven years in China to complete the construction of a metallurgy plant. The market interest rate in the early 1950s in China was about 30 percent per year (2.5 percent per month). Suppose the funds for the project were borrowed at the market interest rate and repayment was made after the completion of the project. The principal and interest payment, calculated at a compound rate, for each dollar borrowed during the first year of the project would be $6.27. It is obvious that no project would be profitable enough to shoulder such a high interest burden. Second, because most equipment had to be imported from advanced countries, the limited supply of foreign exchange made the construction of heavy industry expensive under the market-determined exchange rate. Third, because the agricultural surplus was small and scattered, it was difficult to mobilize enough funds for any lump-sum project.

[6]For example, the interest rate on bank loans was officially reduced from 30 percent per year to about 5 percent per year. For $1 borrowed at the beginning of a seven-year project, the principal and interest payment at the time the project was completed would be reduced from $6.27 to $1.41.

[7]Although the real GNP per capita tripled between 1952 and 1978, the nominal wage was kept almost constant, increasing only 10.3 percent, during the same period (State Statistical Bureau 1987c: 151). For a more detailed discussion of the formation of low nominal-wage policy, see Cheng (1982: chap. 8) and Wu (1965: chap. 4). However, it is worth mentioning that, because of in-kind subsidies, the real wages to urban workers were not as low as the nominal wages suggested. Urban wage rates might have declined sharply if the restriction on the rural-urban migration had been removed (Rawski 1979: 67).

[8]Even with all the above price distortions that facilitated heavy-industry development in China, the time required by a heavy-industry project to earn back the capital investment was, on average, about four to five times longer than the period required by a light-industry project (Li 1983: 37). Therefore, a profit-maximizing private owner would have a stronger incentive to invest in a light-industry project.

[9]Under the New Democracy Policy, adopted by the Communist Party in the late 1940s, private enterprises were supposed to coexist with state-owned enterprises for an extended period after the revolution. However, the enterprises were nationalized soon after 1952 when the government adopted the HIODS. The attempt to secure profits for the heavy-

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by the state to secure the state's control over profits for heavy-industry projects. Meanwhile, to make the low nominal-wage policy feasible, the government had to provide urban residents with inexpensive food and other necessities, including housing, medical care, and clothing. The low interest rates, overvalued exchange rates, low nominal wage rates, and low prices for raw materials and living necessities constituted the basic macropolicy environment of the HIODS.[10]

The macropolicies described induced a total imbalance in the supply and demand for credit, foreign exchange, raw materials, and other living necessities. Because nonpriority sectors were competing with the priority sectors for the low-priced resources, plans and administrative controls replaced markets as the mechanism for allocating scarce credit, foreign reserves, raw materials, and living necessities, ensuring that limited resources would be used for the targeted projects. Moreover, the state monopolized banks, foreign trade, and material distribution systems.[11]

In that way competition was suppressed and profits ceased to be the measure of an enterprise's efficiency.[12] Because of the lack of market discipline, managerial discretion was potentially a serious problem. Managers of state enterprises were deprived of autonomy to

industry projects was the motivation for the government's change in position toward private enterprises.

[10]Theoretically, the Chinese government could use direct subsidies, rather than macropolicy distortion, to facilitate the development of capital-intensive heavy industry in a capital-scarce economy. It can be shown that the subsidy policy is more efficient economically than the policy of price control. However, with the subsidy policy, heavy industry would incur a huge explicit loss and the government would have to impose high taxes on other sectors to subsidize the loss. Under such a situation, the government would find it difficult to defend its position of accelerating the development of heavy industry. Moreover, in an underdeveloped economy, government may not have the ability to collect huge taxes. This may explain why governments, not only in socialist economies but also in capitalist economies, use price controls instead of direct subsidies to facilitate the development of priority sectors.

[11]In the literature in China and other socialist countries, many authors presumed that the distorted policy environment and the administrative controls were shaped by socialist doctrines. The socialist ideology might play a role in the formation of these policies; however, the existence of the policies and controls also have an economic rationale. They facilitate the implementation of a HIODS in a capital-scarce economy. This explains why nonsocialist developing economies such as India had a similar policy environment and administrative controls when they adopted the same development strategy under similar economic conditions.

[12]An enterprise is bound to be loss-making if its outputs happen to be inputs to the other sectors, for example energy and transportation, because the prices of its outputs are suppressed. On the contrary, an enterprise is bound to be profit-making if its outputs are at the low end of the industrial chain, because the enterprise can enjoy low input prices and high output prices at the same time.

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mitigate this problem.[13] The production of state enterprises was dictated by mandatory plans and furnished with most of their material inputs through an administrative allocation system. The prices of their products were determined by pricing authorities. Government agencies controlled the circulation of their products. The wages and salaries of workers and managers were determined not by their performance but by their education, age, position, and other criteria according to a national wage scale. Investment and working capital were financed mostly by appropriations from the state budget or loans from the banking system according to state plans. The state enterprises remitted all their profits, if any, to the state and the state budget also would cover all losses incurred by the enterprises. In short, the state enterprises were like puppets. They had no autonomy in the employment of workers, the use of profits, the plan of production, the supplies of inputs, or the marketing of their products.

The development strategy and the resulting policy environment and allocation system also shaped the evolution of farming institutions in China. To secure cheap supplies of grain and other agricultural products for urban low-price rationing, a compulsory procurement policy was imposed in the rural areas in 1953. This policy obliged peasants to sell fixed quantities of their produce, including grain, cotton, and edible oils, to the state at government-determined prices (Perkins 1966: chap. 4).

In addition to providing cheap food for industrialization, agriculture was also the main foreign-exchange earner. In the 1950s, agricultural products accounted for over 40 percent of all exports. If processed agricultural products are included, agriculture contributed more than 60 percent of China's foreign-exchange earnings until the 1970s. Because foreign exchange was as important as capital for the heavy-industry-oriented strategy, the country's capacity to import capital goods for industrialization in the early stage of development clearly depended on agriculture's performance.

Agricultural development required resources and investment as much as industrial development. The government, however, was reluctant to divert scarce resources and funds from industry to agriculture. Therefore, alongside the HIODS, the government adopted a new agricultural development strategy that did not compete for resources with industrial expansion. The core of this strategy involved the mass mobilization of rural labor to work on labor-intensive investment

[13]The state enterprises were granted some autonomy after the reforms in the late 1970s. As expected, one of the results of the reform was a rapid increase in wages, bonuses, and fringe benefits at the expense of the enterprise's profits.

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projects, such as irrigation, flood control, and land reclamation, and to raise unit yields in agriculture through traditional methods and inputs, such as closer planting, more careful weeding, and the use of more organic fertilizers. The government believed that collectivization of agriculture would ensure these functions.

The government also viewed collectivization as a convenient vehicle for effecting the state's low-priced procurement program of grain and other agricultural products (Luo 1985). Income distribution in the collectives was based on each collective member's contribution to agricultural production. However, monitoring a member's effort is extremely difficult in agricultural production due to dimensions of time and space. The remuneration system in the collectives was basically egalitarian (Lin 1988).

The distorted macropolicy environment, planned allocation system, and micro-management institutions all made the maximum mobilization of resources for the development of heavy industry possible in a capital-scarce economy. Since most private initiative in economic activities was prohibited, the pattern of the government's investment was the best indicator of the bias in the official development strategy. Table 1 shows the sector shares in state capital construction investment from the First Five-Year Plan (1953–57) to the Sixth Five-Year Plan (1981–85). Despite the fact that more than three-quarters of China's population was agricultural, agriculture received less than 10 percent of state investment in the period 1953–85, while 45 percent of investment went into heavy industry. Moreover, heavy industry received a lion's share of the investments that fell under the heading "other,"

TABLE 1

SECTOR SHARES OF STATE CAPITAL CONSTRUCTION INVESTMENT

Five-Year Plan	Agriculture (%)	Light Industry (%)	Heavy Industry (%)	Other (%)
First	7.1	6.4	36.2	50.3
Second	11.3	6.4	54.0	28.3
1963–65	17.6	3.9	45.9	32.6
Third	10.7	4.4	51.1	33.8
Fourth	9.8	5.8	49.6	34.8
Fifth	10.5	6.7	45.9	36.9
Sixth	5.1	6.9	38.5	49.5
1953–85	8.9	6.2	45.0	39.9

SOURCE: State Statistical Bureau (1987b: 97).

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including workers' housing and infrastructure. As a result, the value of heavy industry in the combined total value of agriculture and industry grew from 15 percent in 1952 to about 40 percent in the 1970s (see Table 2).[14]

Judging from China's sector composition, the trinity of the traditional economic system—a distorted macropolicy environment, a planned allocation mechanism, and a puppet-like micro-management institution—reached its intended goal of accelerating the development of heavy industry in China. However, China paid a high price for such an achievement. The economy is very inefficient because of (1) low allocative efficiency, due to the deviation of the industrial structure from the pattern dictated by the comparative advantages of the economy, and (2) low technical efficiency, resulting from managers' and workers' low incentives to work.

TABLE 2

SECTOR COMPOSITION
(Current Prices)

Year	Agriculture %	Light Industry %	Heavy Industry %
1952	56.9	27.8	15.3
1957	43.3	31.2	25.5
1962	38.8	28.9	32.3
1965	37.3	32.3	30.4
1970	33.7	30.6	35.7
1975	30.1	30.8	39.1
1980	30.8	32.6	36.6
1985	34.3	30.7	35.0

SOURCE: State Statistical Bureau (1989: 11).

[14]When the reforms began in 1979, the government initially planned to increase agriculture's share in the state's fixed capital investment from 11 percent in 1978 to 18 percent in the following three to five years. Because of the rapid agricultural growth brought about by the rural reforms, agriculture's share in the state fixed capital investment actually declined sharply to only about 3 percent in the late 1980s and early 1990s. However, the share of total fixed capital investment in agriculture in the nation as a whole did not decline as much as the figures suggest, because part of the decline in the state investment was compensated for by an increase in farmers' investment (Feder et al. 1992). Similarly, the share of heavy industry in the state's fixed capital investment did not decline after the reforms in 1979. However, the state's share in the total investment declined from 82 percent in 1980 to 66 percent in 1990. The nonstate sectors' investments are mostly in projects that are less capital-intensive. Therefore, the share of heavy industry in the nation's fixed capital investment is less than the share in the state investment.

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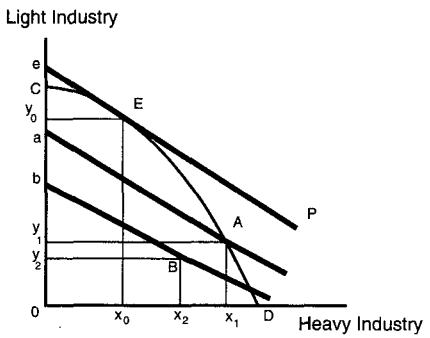
1. *Low allocative efficiency*. In the current stage of China's economic development, capital is relatively scarce and labor is relatively abundant. If prices were determined by market competition, capital would be relatively expensive and labor relatively inexpensive. Therefore, the comparative advantages of the Chinese economy lie in labor-intensive sectors. If investments had been guided by market forces, profit incentives would have induced entrepreneurs to adopt capital-saving and labor-using technologies and to allocate more resources to labor-intensive industries. The effects of the HIODS on the industrial structure can be illustrated by Figure 3. Let us assume there are only two sectors in the economy, namely, labor-intensive light industry and capital-intensive heavy industry. Given the endowments, OCD is the production possibility frontier. EP represents the market-determined relative prices line, which existed before the imposition of the HIODS. Under the undistorted relative prices, the economy will produce OY_0 of light-industry products and OX_0 of heavy-industry products. However, for the development of heavy industry, the state monopolized the allocation system and used administrative measures to direct the allocation of resources. If we suppose the target of the development strategy is to expand heavy industry from OX_0 to OX_1, then the state would need to reduce the production of light industry from OY_0 to OY_1 to shift resources from light industry to heavy industry. The production possibility frontier is truncated to Y_1AD. If there is no technical inefficiency, the production mix of the economy would locate on A, corresponding to a quantity of OY_1 light-industry products and OX_1 heavy-industry products.[15]

FIGURE 3

DEVELOPMENT STRATEGY AND THE TRUNCATED PRODUCTION FRONTIER



[15]Similarly, the development of a service sector was suppressed to facilitate the development of heavy industry. Agriculture, except for grain and cotton, was also suppressed. The reason

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As we can see from Figure 3, the static consequence of the strategy is that the economy, based on the prices before distortion, suffers a loss of 'ea' in absolute magnitude or 'ea/eO' in relative measure.[16] The income loss due to allocative inefficiency implies the reduction of surplus available for investment. If we assume that a fixed portion of the national income is used for investment, the decline in investment would further diminish gross investment. However, if we assume that the government's plan is to develop light and heavy industry in a fixed ratio of OX_1/OY_1, then each production cycle would repeatedly generate an income loss of 'ea/eO' in relative measure. All these factors significantly dampen the growth of the whole economy. To maintain the growth rate, it is necessary to raise the accumulation rate, resulting in insufficient consumption and long-lasting low living standards for people.[17]

2. *Low technical efficiency.* Because profits ceased to be a measure of efficiency and the planned allocation system often failed to distribute materials in time, managers were forced to keep large reserves and had no incentive for using resources economically. Overstaffing, underutilization of capital resources, and overstocking of inventories characterized China's puppet-like state enterprises.[18] Moveover, man-

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that grain and cotton were treated differently was because the government also pursued a grain self-sufficiency policy, and cotton was the basic raw material for industry.

[16]The studies by Desai and Martin (1983) and by Whitesell and Barreto (1988) estimate the misallocation of capital and labor among the sectors of the Soviet economy, which also adopted the heavy-industry-oriented development strategy. Desai and Martin find losses from misallocation in the range of 3 to 10 percent—possibly up to 15 to 17 percent of the inputs employed in industry. Whitesell and Barreto find that in the early 1980s output gains equivalent to 4 to 6 percent could have been achieved by a reallocation of capital and labor among the sectors of Soviet industry.

[17]The average annual rate of accumulation was raised from 24.2 percent of national income in the First Five-Year Plan to 33.0 percent and 33.2 percent in the Fourth and Fifth Five-Year Plans, respectively, whereas the average annual growth rate of national income dropped from 8.9 percent to 5.5 percent and 6.1 percent. As a result, wages for state employees were held almost constant between the years 1952 and 1978. As Deng Xiaoping admitted to visiting overseas Chinese in October 1974, wages were low, the living standard was not high, and workers in China only had enough clothing and a full stomach (Cheng 1982: 248).

[18]Brada (1991) estimates that overstaffing in Czechoslovak industry was as high as 15 percent. The State Economic System Reform Commission in a recent report estimated that the total number of overstaffing in China's state enterprises was more than 30 million, about 30 percent of the total labor force in the state sectors (Zhonghua Zhoumo Bao 1995). A study by the World Bank (1985a) shows that, for the production of per unit gross domestic product, the consumption of energy, steel, and transportation in China were, respectively, 63.8 percent to 229.5 percent, 11.9 percent to 122.9 percent, and 85.6 percent to 559.6 percent greater than those of other developing countries. In the structure of total capital, the working capital accounted for the largest share in China and was 4.8 to 25.7 percentage points higher than that of other countries. This implied that inventories of inputs and outputs were larger and inventory were kept longer in China than in other countries.

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agers had no authority over workers' wage rates and bonuses. Wages were not related to effort in the enterprise nor to the enterprise's profits; hence, workers had little incentive to work efficiently. Similarly, in the agricultural collectives, farm workers had a low incentive to work because the link between reward and effort was weak.[19] Losses resulting from these technical inefficiencies mean that production will end up at some point inside the production possibility frontier, such as point B in Figure 3.

Because of low allocative and technical efficiency, the Chinese economy experienced an extremely low rate of total factor productivity growth in China. Even with the most favorable assumptions, the World Bank (1985a) found that total factor productivity grew by only 0.5 percent between 1952–81, a quarter of the average growth rate of 19 developing countries included in the study. Moreover, the total factor productivity of China's state enterprises stagnated or fell between 1957–82 (World Bank 1985b).

An Analytical Review of China's Economic Transition

It is unlikely that China's leaders had worked out a blueprint when they set out to reform the economic system (Perkins 1988: 601). However, retrospectively, China's transition followed a logical process that is predictable from the theoretical model described. The trinity of the traditional economic system is endogenous to the adoption of a HIODS in a capital-scarce economy. The main fault in the economic system was low economic efficiency arising from structural imbalance and incentive problems. Before the late 1970s, the government had made several attempts to address the structural problems by decentralizing the allocative mechanism.[20] However, the administrative nature of the allocative mechanism was not changed and the policy environment and managerial system were not altered; thus, the attempts to rectify the structural imbalance and improve economic incentives failed. The goals of the reform in late 1978 were to rectify the structural imbalance and improve incentives. However, what set the reforms apart from previous attempts were the micro-management system reforms that made farmers and managers and workers in state enterprises partial residual claimants. That small crack in the trinity of the

[19]Lin (1992) estimates that losses due to low incentives in the agricultural collectives were as much as 20 percent of total factor productivity. For a theoretical model of the monitoring problems regarding incentives in a collective farm, see Lin (1989a).

[20]The first attempt was made in 1958–60, the second in 1961–65, and the third in 1966–76 (Wu and Zhang 1993: 65–7).

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traditional economic system was eventually pried open, leading to the gradual dismantlement of the traditional system.

The Micro-Management Institution Reforms

The most important change in the micro-management institution was the replacement of collective farming with a household-based system, now known as the household responsibility system. In the beginning, the government had not intended to change the farming institutions. Although it had been recognized in 1978 that solving managerial problems within the collective system was the key to improving farmers' incentives, the official position at that time was still that the collective was to remain the basic unit of agricultural production. Nevertheless, a small number of collectives, first secretly and later with the blessing of local authorities, began to try out a system of leasing a collective's land and dividing the obligatory procurement quotas to individual households in the collective. A year later those collectives brought out yields far larger than those of other teams. The central authorities later conceded the existence of the new form of farming, but required that it be restricted to poor agricultural regions, mainly to hilly or mountainous areas, and to poor collectives in which people had lost confidence in the collective system. However, this restriction was ignored in most regions. Production improved after a collective adopted the new system, regardless of its relative wealth or poverty.

Full official recognition of the household responsibility system as a nationally acceptable farming institution was eventually given in late 1981, exactly two years after the initial price increases. By that time, 45 percent of the collectives in China had already been dismantled and had instituted the household responsibility system. By the end of 1983, 98 percent of agricultural collectives in China had adopted the new system. When the household responsibility system first appeared, the land lease was only one to three years. However, the short lease reduced farmers' incentives for land-improvement investment. The lease contract was allowed to be extended up to 15 years in 1984. In 1993, the government allowed the lease contract to be extended for another 30 years after the expiration of the first contract.

Unlike the spontaneous nature of farming institution reform, the reform in the micro-management institution of the state enterprises was initiated by the government. Those reforms have undergone four stages. The first stage (1979–83) emphasized several important experimental initiatives that were intended to enlarge enterprise autonomy and expand the role of financial incentives within the traditional economic system. The measures included the introduction of profit reten-

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tion and performance-related bonuses and permitted the state enterprises to produce outside the mandatory state plan. The enterprises involved in exports also were allowed to retain part of their foreign exchange earnings for use at their own discretion. In the second stage (1984–86) the emphasis shifted to a formalization of the financial obligations of the state enterprises to the government and exposed enterprises to market influences. From 1983, profit remittances to the government were replaced by a profit tax. In 1984, the government allowed state enterprises to sell output in excess of quotas at negotiated prices and to plan their output accordingly, thus establishing the dual-track price system. During the third stage (1987–92), the contract responsibility system, which attempted to clarify the authority and responsibilities of enterprise managers, was formalized and widely adopted. The last stage (1993–present) attempted to introduce the modern corporate system to the state enterprises. In each stage of the reform, the government's intervention was reduced further and the state enterprises gained more autonomy.

The reform of the micro-management system has achieved its intended goal of improving technical efficiency. Empirical estimates show that almost half of the 42.2 percent growth of output in the cropping sector in the years 1978–84 was driven by productivity change brought about by the reforms. Furthermore, almost all of the productivity growth discussed was attributable to the changes resulting from the introduction of the household responsibility system (Fan 1991; Lin 1992; McMillan et al. 1989; Wen 1993). Estimates of the production function in several studies find that for industry the increase in enterprise autonomy increased productivity in the state enterprises (Chen et al. 1988; Gordon and Li 1991; Dollar 1990; Jefferson et al. 1992; Groves et al. 1994, 1995). Therefore, the reforms in the system of micro-management in both agriculture and industry have created a flow of new resources, an important feature of China's reforms.

The increase in enterprise autonomy under a distorted macropolicy environment, however, also invited managers' and workers' discretionary behavior. Despite an improvement in productivity, the profitability of the state enterprises declined and the government's subsidies increased due to both a faster increase in wages, fringe benefits, and other unauthorized expenditures (Fan and Schaffer 1991) and the competition from the autonomous township and village enterprises (TVEs) (Jefferson and Rawski 1995). However, once the enterprises had tasted autonomy, it would have been politically too costly to revoke it. The decline in the profits of state enterprises and the competition from TVEs forced the government to try other measures that further increased the autonomy of state enterprises in the hope

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that the new measures would make the enterprises financially independent.

Resource Allocation Mechanism Reform

The increase in enterprise autonomy put pressure on the planned distribution system. Because the state enterprises were allowed to produce outside the mandatory plans, the enterprises needed to obtain additional inputs and to sell the extra outputs outside the planned distribution system. Under pressure from the enterprises, material supplies were progressively delinked from the plan, and retail commerce was gradually deregulated. At the beginning, certain key inputs remained controlled. However, the controlled items were increasingly reduced. Centralized credit rationing was also delegated to local banks at the end of 1984.

An unexpected effect of the relaxation of the resources allocation system was the rapid growth of the nonstate enterprises, especially the TVEs.[21] Rural industry already existed under the traditional system as a result of the government's decision to mechanize agriculture and to develop rural processing industries to finance the mechanization in 1971. In 1978 the output of TVEs consisted of 7.2 percent of the total value of industrial output in China. Before the reforms, the growth of TVEs was severely constrained by access to credits, raw materials, and markets. The reforms created two favorable conditions for the rapid expansion of TVEs: (1) a new stream of surpluses brought out by the household responsibility reform provided a resource base for new investment activities, and (2) the relaxation of rigidity in the traditional planned allocation system provided access to key raw materials and markets. In the period 1981–91, the number of TVEs, employment, and the total output value grew at an average annual rate of 26.6 percent, 11.2 percent, and 29.6 percent, respectively. The annual growth of total output value for TVEs was three times that of the state firms in the same period. In 1993, TVEs accounted for 38.1 percent of the total industrial output in China. The share of industrial output from nonstate enterprises increased from 22 percent in 1978 to 56.9 percent in 1993 (State Statistical Bureau 1995: 73).

The rapid entry of TVEs and other types of nonstate enterprises produced two unexpected effects on the reforms. First, nonstate enterprises were the product of markets. Being outsiders to the traditional

[21]The nonstate enterprises include the TVEs, the private enterprises, joint-venture enterprises, overseas Chinese enterprises, and foreign enterprises. Among them, the TVEs are the most important in terms of output share and number of enterprises. It is noteworthy that TVEs, although different in many aspects from state enterprises, are public enterprises that are funded, owned, and supervised by the township or village governments.

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economic system, nonstate enterprises had to obtain energy and raw materials from competitive markets, and their products could be sold only to markets. They had budget constraints and would not survive if their management was poor. Their employees did not have an "iron rice bowl" and could be fired. As a result, the nonstate enterprises were more productive than the state enterprises, as the comparisons of output growth and total factor productivity growth between the state and collective sectors in Table 3 show. The dynamism of nonstate enterprises exerted pressure on the state enterprises and triggered the state's policy of transplanting the micro-management of the nonstate enterprises to the state enterprises and of delegating more autonomy to the state enterprises. Reform measures for improving the micro-management institution of state enterprises—such as replacement of profit remittance by a profit tax, the establishment of the contract responsibility system, and the introduction of the modern corporate system to state enterprises—were responses to competitive pressure from TVEs and other nonstate enterprises (Jefferson and Rawski 1995).

Second, the development of nonstate enterprises significantly rectified the misallocation of resources. In most cases, nonstate enterprises had to pay market prices for their inputs, and their products were sold at market prices. The use of market prices induced most nonstate enterprises to adopt labor-intensive technology to concentrate on labor-intensive small industries.[22] Therefore, the technological struc-

TABLE 3

GROWTH RATE OF OUTPUT AND TOTAL FACTOR PRODUCTIVITY
(Average Annual Percentage Change)

	1980–88	1980–84	1984–88
State Sector			
Output	8.49	6.77	10.22
TFP	2.40	1.80	3.01
Collective Sector			
Output	16.94	14.03	19.86
TFP	4.63	3.45	5.86

SOURCE: World Bank (1992).

[22]For example, in 1986 an average industrial enterprise in China had 179.9 workers, and the fixed investment per worker was 7,510 yuan (State Statistical Bureau 1987a: 3); whereas an average TVE in the same year had 28.9 workers, and the fixed investment per worker was 1,709 yuan (State Statistical Bureau 1987c: 205).

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ture of nonstate enterprises was more consistent with the comparative advantages of China's endowments. The entry of TVEs mitigated the structural imbalance caused by the HIODS.

Macropolicy Environmental Reform

Among the trinity of the traditional economic system, the distorted macropolicy environment was linked most closely to the development strategy, and its effects on allocative and technical efficiency were indirect. The reforms of the macropolicies were thus the most sluggish. We will argue later that most economic problems that appeared during the reforms—for example, the cyclic pattern of growth and the rampant rent seeking—can be attributed to the inconsistency between the distorted policy environment and the liberalized allocation and enterprise system. Therefore, the Chinese government constantly faced a dilemma: to make the macropolicy environment consistent with the liberalized micro-management institution and resource allocation mechanism or to redeprive the micro-management institution's autonomy and to recentralize resource allocation mechanism for maintaining the internal consistency of the traditional economic system. The deprivation of enterprise autonomy would definitely incur the resistance of employees of state enterprises. A return to the traditional economic system would also mean return to economic stagnation. Therefore, no matter how reluctant the government was, the only sustainable choice was to reform the macropolicy environment and make macropolicies consistent with the liberalized allocation and micro-management system.

Changes in the macropolicy environment started in the commodity price system. After the introduction of profit retention, the enterprises were allowed to produce outside the mandatory plan. The enterprises first used an informal barter system to obtain the outside-plan inputs and to sell the outside-plan products at premium prices. In 1984, the government introduced the dual-track price system, which allowed the state enterprises to sell their output in excess of quotas at market prices and to plan their output accordingly. The aim of the dual-track price system was to reduce the marginal price distortion in the state enterprises' production decisions while leaving the state a measure of control over material allocation. By 1988 only 30 percent of retail sales were made at plan prices, and the state enterprises obtained 60 percent of their inputs and sold 60 percent of their outputs at market prices (Zou 1992).

The second major change in the macroenvironment occurred in the foreign exchange rate policy. In the years 1979–80, the official exchange rate was roughly 1.5 yuan per U.S. dollar. The rate could

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not cover the costs of exports, as the average cost of earning one U.S. dollar was around 2.5 yuan. A dual rate system was adopted at the beginning of 1981. Commodity trade was settled at the internal rate of 2.8 yuan per dollar; the official rate of 1.53 yuan per dollar continued to apply to noncommodity transactions. After 1985, the yuan was gradually devalued. Moreover, the proportion of retained foreign exchange, which was introduced in 1979, was gradually raised, and enterprises were allowed to swap their foreign exchange entitlement with other enterprises through the Bank of China at rates higher than the official exchange rate. Restrictions on trading foreign exchanges were further relaxed with the establishment of a "foreign exchange adjustment center" in Shenzhen in 1985, in which enterprises could trade foreign exchanges at negotiated rates. By the late 1980s, such centers were established in most provinces in China and more than 80 percent of the foreign exchange earnings was swapped in such centers (Sung 1994). The climax of foreign exchange-rate policy reform was the establishment of a managed floating system and unification of the dual rate system on January 1, 1994.

Interest-rate policy is the least affected area of the traditional macropolicy environment. Under the HIODS, the interest rate was kept artificially low to facilitate the expansion of capital-intensive industries. After the reforms began in 1979, the government was forced to raise both the loan rates and the savings rates several times.[23] However, the rates were maintained at levels far below the market-clearing rates throughout the reform process. In late 1993, the government announced a plan to establish three development banks with the function of financing long-term projects, import/export, and agricultural infrastructure at subsidized rates and to turn the existing banks into commercial banks. The three development banks were established in 1994. The commercialization of the existing banks is expected to take at least another three to five years. Moreover, it is unclear whether after the reform the interest rate will be regulated or will be determined by markets. The mentality of the HIODS is deeply rooted in the mind of China's political leaders. To accelerate the development of capital-intensive industry in a capital-scarce economy, a distorted macropolicy environment—in the form of a low interest-rate policy—

[23]To stop bank runs, the savings rates were indexed to inflation rates in October 1988. But the policy was revoked in 1991. In May 1993, the interest rate for a one-year time deposit was 9.18 percent, and for a one-to-three-year basic investment loan it was 10.80 percent (State Statistical Bureau 1993: 670–71). However, the market rate for a commercial loan was between 15 and 25 percent.

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is essential. It is likely that administrative interventions in the financial market will linger for an extended period.

Because reforms in macropolicies, especially those regarding the interest rate, lagged behind the reforms in the allocation system and micro-management institutions, there were several economic consequences. The first one was the recurrence of a growth cycle. Maintaining the interest rate at an artificially low level gave enterprises an incentive to obtain more credits than the supply permitted. Before the reforms, the excess demands for credit were suppressed by restrictive central rationing. The delegation of credit approval authority to local banks in the autumn of 1984 resulted in a rapid expansion of credits and an investment thrust. As a result, the money supply increased 49.7 percent in 1984 compared with its level in 1983. The inflation rate jumped from less than 3 percent in the previous years to 8.8 percent in 1985 (see Figure 1). In 1988 the government's attempt to liberalize price controls caused a high inflation expectation. The interest rate for savings was not adjusted. Therefore, panic buying and a mini-bank run occurred. Loans, however, were maintained at the previously set level. As a consequence, the money supply increased by 47 percent in 1988. The inflation rate in 1988 reached 18 percent (see Figure 1). During the periods of high inflation, the economy overheated. A bottleneck in transportation, energy, and the supply of construction materials appeared. Because the government was reluctant to increase the interest rate as a way of checking the investment thrust, it had to resort to centralized rationing of credits and direct control of investment projects—a return to the planned system. The rationing and controls gave the state sectors a priority position. The pressure of inflation was reduced, but slower growth followed.

As mentioned earlier, although the reforms in the micro-management institution improved the productivity of the state sector, deficits increased due to a faster increase of wages and welfare as a result of the discretionary behavior of the managers and workers in the state enterprises. Therefore, fiscal income increasingly depended on the nonstate sectors. During the period of tightening state control, the growth rates of the nonstate sectors declined because access to credits and raw materials were restricted. Such a slowdown in the growth rate became fiscally unbearable. Therefore, the state was forced to liberalize the administrative controls to make room for the growth of the nonstate sectors. A period of faster growth followed. Nevertheless, conflicts arose again between the distorted macropolicy environment and the liberalized allocation mechanism and micro-management institution.

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A second consequence of the inconsistency between the distorted policy environment and the liberalized allocation mechanism and micro-management institutions was rampant rent seeking. After the reforms, market prices existed, legally or illegally, along with planned prices for almost every kind of input and commodity that the state controlled. The difference between the market price and the planned price was an economic rent. It is estimated that the economic rent from the controlled commodity price, the interest rate, and the exchange rate was at least 200 billion yuan, about 21.5 percent of the national income in 1988. In 1992, the economic rent from bank loans alone reached 220 billion yuan (Hu 1994).[24] The nonstate enterprises as well as the autonomous state enterprises certainly had incentives to engage in rent-seeking activities through bribes and other measures to obtain the underpriced resources from the state allocation agencies. It is reported that under competitive pressure, the state enterprises in the heavy industries, which were given priorities in obtaining the state-controlled resources, also needed to give certain side payments to the banks and other allocation agencies to secure the earmarked loan and materials or to obtain them promptly.

Because of the rent-seeking activities of other types of enterprises, state enterprises often were unable to obtain the credits and materials indicated in the plans. The rent-seeking activities also caused widespread public resentment and became a source of social instability. To guarantee the survival of the state enterprises and to check social resentment, the government attempted to reinstitute tight controls on the allocation system in the austerity programs of 1986 and 1988. However, the controls were relaxed later to allow the growth of the nonstate sectors. Except for the interest rate, administrative controls on the prices of most materials and commodities have been removed.

The Reform Approaches: A Comparison

There has been much discussion as to why China's reforms have been more successful than the reforms in Eastern Europe and the former Soviet Union (Chen et al. 1992; Qian and Xu 1993; Harrold 1992; McMillan and Naughton 1992; Gelb et al. 1993; McKinnon 1994). Except for the desirability of gradualism, the studies emphasized China's initial industrial structure (China has a large agricultural sector) or China's decentralized regional economic structure. If Chi-

[24]The total credit of the state banks was 2,161.6 billion yuan (U.S. $248.5 billion at the swap market exchange rate). The difference between the official interest rate and the market rate was about 10 percent. The rents from bank loans alone were as high as 216 billion yuan.

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na's success was mainly the result of her unique initial conditions, then that success does not have any implications for other economies, where the initial conditions may be different. Nevertheless, the economic problems in prereform China—namely, the structural imbalance and the low incentives—are common to all socialist economies because they all adopted a similar economic development strategy and because they all have a similar macropolicy environment, planned allocation mechanism, and puppet-like state enterprises. Empirical evidence shows that, as in prereform China, Eastern European and Soviet economies were all overindustrialized with oversized state enterprises; their service sectors and light industries were underdeveloped; and employees' incentives were low (Newbery 1993; Brada and King 1991; Sachs and Woo 1993).

For an economy with a given stock of resources, the efficient point in the production plan is point E; however, under the HIODS, the actual production point is B, as illustrated in Figure 3. "Shock therapy" attempts to reform the economic system so that the existing stock of resources can be used more efficiently. Diagrammatically, the reforms attempt to move production from point B to point E. Stabilization, marketization, and privatization are necessary conditions for achieving this goal. This is because, to induce economic agents to move from B to E voluntarily, the agents should have a stable expectation about the economy, correct relative-price signals, and the incentives to respond to the price signals. The prescription of stabilization, price liberalization, and privatization is internally consistent. The scheme is equivalent to a replacement in a short sequence of the whole traditional economic system, shown in Figure 2, which is endogenous to the HIODS.

If the transitional costs of reform were free, "shock therapy" would enable the economy to jump from point B directly to point E, as the dotted line in Figure 4a shows. However, some fixed equipment in heavy industries cannot be used for production in light industries; for other equipment, modifications are required for new uses (Brada and King 1991). Workers in heavy industry also need retraining before they can be assigned to new jobs. Moreover, the establishment of new market institutions takes time and resources (Murrel and Wang 1993, Lin 1989). During the initial stage of reforms, an increase in light industry would not be able to compensate for the decline in heavy industry. Therefore, instead of moving directly from point B to point E in Figure 4a, the economy moves first from B to F before reaching E. The resulting GNP path of growth is a "J-curve," as shown in Figure 4b. How large the decline in GNP would be and how long it would take before recovery would depend on how severe the initial

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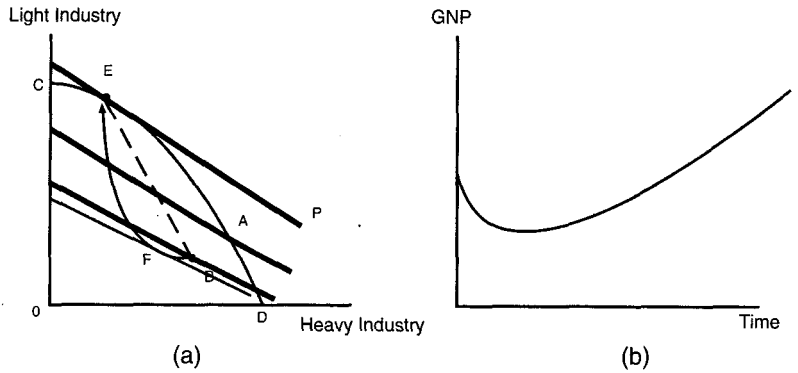
FIGURE 4
"BIG BANG" REFORM



distortion is and how quickly the necessary institutions can be established, something that can only be determined empirically. The experiences of Eastern Europe and the former Soviet Union suggest that a decline can be more than 50 percent of the GNP and that it may take several years before a turning point is reached. The government is certain to encounter a legitimacy crisis when the results of reforms are so dreadful (Dewatripont and Roland 1992). The leadership may not be able to hold a consensus on the course of further reforms, and political instability is likely to follow. Instead of a "J-curve," the result of "shock therapy" may be a big "L-curve."

When China began its reforms in the late 1970s, the political leadership did not question the feasibility or desirability of the traditional economic system. Its attempt was simply to improve incentives in the state enterprises and collective farms by giving agents in state enterprises and collective farms a degree of autonomy so that a closer link between personal rewards and individual efforts could be established. That is, the attempt was to move from point B to point A in Figure 5a. The empirical studies cited earlier show that the attempt was successful and a new stream of resources was created by the micro-management system reform.

The granting of partial microautonomy represented a small crack in the traditional economic system. However, partial autonomy also implies that entrepreneurs gain partial control over the allocation of the newly created stream of resources. The suppressed sectors in the traditional economy are the sectors that are consistent with the comparative advantages of the economy. The unexpected results of the micro-management reform are that, driven by profit motivation,

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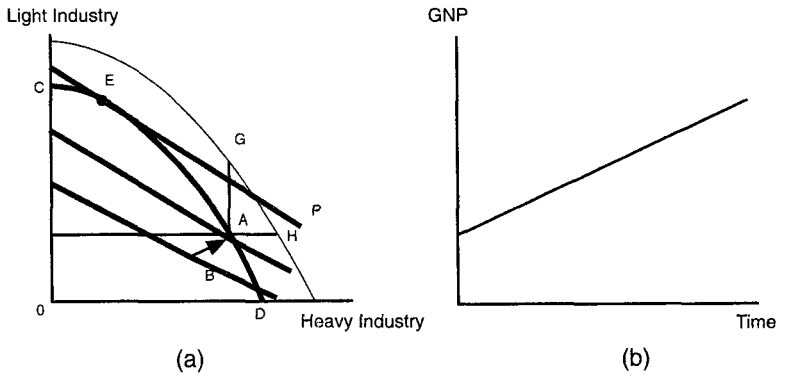
FIGURE 5

GRADUAL REFORM



the autonomous entrepreneurs allocated the new stream of resources under their control to the more profitable suppressed sectors. Because the planned allocation mechanism and distorted macropolicy environment were preserved, the state still had control over the old stream of resources and guaranteed that those resources would be allocated to the priority sectors. That is, the economy follows a dynamic path from point A to a point close to G, instead of to H, in Figure 5a. Therefore, throughout the reform process, the economy enjoys continuous growth as shown in Figure 5b. Moreover, as the economy grew, the proportion of resources that was allocated according to the planned prices became increasingly small. Therefore, by the time the price for a commodity was liberalized, the shock was much smaller than the gap between the market price and plan price would have suggested.[25]

If the above descriptions are a reasonable explanation of why China was able to enjoy continuous economic growth during the reform process, we can expect the following: first, the expansion of the suppressed sectors would not result in a decline in the priority sectors because the expansion of the suppressed sectors was supported by a new stream of resources; and, second, the economy should reach a higher rate of economic growth than the rate before the reforms because the new stream of resources was allocated to the more efficient sectors. Both assertions are confirmed by the empirical evidence. Table 4 shows the indexes and the growth rates of the major sectors

[25]The official exchange rate was 5.7 yuan for one U.S. dollar and the swap market rate was 8.7 yuan for one U.S. dollar when the exchange rate in China was unified to the swap market rate at the beginning of 1994. However, the shock was very small because before the unification about 80 percent of the foreign exchanges had already been traded in the swap markets.

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TABLE 4

INDEX AND GROWTH RATE OF NATIONAL INCOME IN SELECTED SECTORS

Year	Total	Agriculture	Industry		Construction	Transportation	Commerce
			Total	State			
1952	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	453.4	161.2	1,438.9	3,345.3	573.5	546.9	296.4
1993	1,695.7	346.2	8,546.7	10,385.8	2,764.3	2,037.7	783.6
Average Annual Growth Rate (percent)							
1952–78	6.0	1.9	10.8	14.5	6.9	6.8	4.3
1978–92	8.6	4.9	11.8	7.3	10.3	8.6	6.3

SOURCE: State Statistical Bureau (1993: 34, 413; 1994: 34, 375).

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in the national economy. It can be seen that no sector has declined since the reforms started and, except for the state enterprises, each sector's growth has accelerated.

Conclusion

Even though China's leaders did not have a blueprint in mind when reforms started, China's reforms have followed a path that can be explained by the theory of induced institutional innovation (Lin 1989, North 1990). The traditional economic system was itself a product of institutional innovation induced by the government's attempt to pursue a HIODS in a capital-scarce economy. The traditional system made the mobilization of resources for building up the strategy-determined priority sectors possible. However, its economic efficiency was low. Therefore, once the integrity of the traditional economic system was cracked by the introduction of microautonomy, institutional changes occurred in a way that was self-propelling toward the replacement of the traditional system with a more efficient market system. In the process, the efficiency of the state enterprises was improved through greater autonomy and by meeting competition from the nonstate sectors. However, the dynamism of the economy came mainly from the swift entry of new, small, nonstate enterprises. The old planned allocation mechanism and distorted macropolicy environment gradually became unsustainable and were discarded. During the reform process, the state, the enterprises, and the people have had sufficient time to make adjustments to the new market system. The reforms benefit the majority of people as the economy has maintained strong growth throughout the whole process.

The "big bang" approach in Eastern Europe and the former Soviet Union also attempts to replace an inefficient economic system with a more efficient market system. The privately owned small firms emerged immediately after the lifting of the ban on private enterprises. However, the privatization of medium- and large-scale state enterprises was prolonged and proceeded slowly (Murrel and Wang 1993, Wang 1992). This resulting enterprise mix is in fact similar to what emerged in China. However, China's approach did not disrupt production in the state sectors. Therefore, China's gradual approach to reform achieved the same positive effects of the "big bang" approach but avoided its costs.[26] If transitional costs and the path-dependence of

[26]The opportunity cost for the workers to move from the state sectors to the nonstate sectors might be higher in Eastern Europe and the former Soviet Union (EE/FSU) than in China because the subsidies to the workers were higher and the economies were more decentralized in EE/FSU than in China, as Sachs and Woo (1993) and Qian and Xu (1993) correctly emphasized. However, the higher opportunity cost is not a sufficient condition for nullifying the applicability of the Chinese approach. In China the differences between the state-

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institutional changes are taken into account, China's gradual approach may be both theoretically and empirically preferable to the "big bang" approach (Wei 1993).

The overall performance of China's gradual approach to transition is remarkable, but China has paid a price. Because the reform of the macropolicy environment, especially interest-rate policy, has lagged behind reforms of the micro-management institution and resource allocation mechanism, institutional arrangements in the economic system have become internally inconsistent. As a result of the institutional incompatibility, rent-seeking, investment rush, and inflation have become internalized in the transition process. To mitigate those problems, the government often resorts to traditional administrative measures that cause the economy's dynamic growth to come to a halt and retard institutional development.

From the preceding analysis we find that it is imperative for China to complete the reform of the macropolicy environment so as to remove the institutional incompatibility and ensure a sustained, smooth growth path. Since the macropolicy environment is endogenous to the state's development strategy, the government must give up the anti-comparative advantage HIODS—or, in a modern version, the capital-intensive high-tech industry-oriented development strategy—and shift to a strategy based on China's comparative advantages. In addition, as the Chinese economy becomes a more mature market economy and is more integrated with the world economy, it is essential for the continous growth of the Chinese economy to establish a transparent legal system that protects property rights so as to encourage innovations, technological progress, and domestic as well as foreign investments in China.

Thus far, most elements in China's reforms were induced rather than designed. However, the experience of China's transition may provide a useful lesson for designing reform policies in other economies where the heavy-industry-oriented strategy or other similar development strategies have been adopted under capital-scarce conditions.[27]

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regulated prices and the market prices in general were less than 30 percent and at most 100 percent before the reforms. However, the differences for many commodities in EE/FSU often reached factors of 10. Therefore, the expected returns for a worker to move from the state sectors to the nonstate sectors were much higher in EE/FSU than in China. The existence of a large secondary economy in EE/FSU before the reforms suggests that resources would have flowed quickly into the suppressed sectors if the activities had been legalized. The rapid emergence of small private firms after lifting the ban on private enterprises confirms this proposition.

[27]In essence, the HIODS is a forging-ahead strategy in which the government distorts the macropolicy environment to facilitate the development of some industries that exceed the stage of development dictated by the comparative advantages of the economy's endowment structure. The import-substitution strategy widely adopted in Latin America is another

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Certainly, stages of development, endowment structures, political systems, and cultural heritage differ from one economy to another. To be effective, actual reform measures should take the economy's initial conditions into consideration and exploit all favorable internal and external factors.[28] Therefore, the specific design and sequence of reforms in an economy should be "induced" rather than "imposed." However, in addition to the general advice of maintaining economic and political stability and moving the reforms in a path-dependent manner, the following lessons may be useful for a government attempting reforms in an economic system similar to that of prereform China:

- Grant autonomy to the micro-management unit to improve the incentive structure and to create a new stream of resources by improving productivity.
- Allow the new stream of resources to be allocated by the autonomous enterprises outside the plan and at market prices to the suppressed sectors while maintaining the survival of the old priority sectors with the resources still under the state's plan control.
- Liberalize the distorted policy environment and planned allocation system to make them consistent with the autonomous micro-management system when the new stream of resources allocated under the market outweighs the stream of resources allocated under the plan.

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example of the forging-ahead development strategy.

[28]The presence of overseas Chinese, the existence of a large stock of industrial resources in the rural sector before the start of reform, and the continuation of substantial marketing activity throughout the agricultural sector during the entire socialist period are among the important initial conditions that have contributed unequivocally to the success of China's reforms.

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The Brady Plan and Market-Based Solutions to Debt Crises

Ian Vásquez

At the end of the 1980s—the so-called "lost decade" in Latin America—the incoming Bush administration devised the Brady Plan, a new U.S. strategy that emphasized debt-forgiveness for highly indebted developing countries. The debt crisis that had erupted in 1982 with Mexico's announcement that it could not honor its debt obligations had gone through two distinct phases. By the end of the decade it was widely accepted that those phases represented failed attempts to resolve the sovereign debt problem.

During the first phase, from 1982 to 1985, developed nations responded to the possibility of default by Third World countries by providing new loans to those countries through commercial banks, the International Monetary Fund (IMF), and other multilateral lending agencies. The crisis was treated as one of liquidity and not of solvency. Thus, the goal of new lending was to give the indebted countries time to put their finances back in order to again repay their debts within a few years. Developing nations followed IMF-sponsored adjustment measures that included raising taxes, raising tariffs, devaluing the currency, and, in many cases, reducing government expenditures (structural adjustments were not seriously considered because the fundamental problem was thought to be temporary illiquidity).

The second phase came with the Baker Plan when it became evident that developing countries were not growing out of their debt and in fact were becoming more indebted. The new plan, introduced by U.S. Treasury Secretary James A. Baker in 1985, emphasized new lending to the highly indebted countries based on market conditionality. Thus, the proposal promised $9 billion from the multilateral agencies and $20 billion from commercial banks in exchange for market-oriented reforms in recipient countries—for example, tax reductions,

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privatization of state-owned enterprises, reduction of trade barriers, and investment liberalization.

By 1987–88, it became apparent that the Baker Plan too had been unsuccessful at either reducing debt or allowing the target countries to grow their way out of debt as had been intended. Like the strategy before it, the Baker Plan was unable to provide the proper incentives for developing countries to introduce consistent market reforms, or for banks to supply new money that would finance such reforms. From the end of 1985 to the end of 1988, net lending from the public sector to the Baker Plan countries amounted to $15.7 billion, while new money from private banks amounted to $12.8 billion (Cline 1995: 210). Paul Krugman (1994: 700) showed that the stock of official creditor loans to the Baker countries rose from $50 billion to $120 billion from 1982 to 1987, while that of bank loans remained at $250 billion from 1982 to 1987, then fell to $225 billion in 1988. It appeared that as commercial banks decreased their debt stock in the Baker countries, the official lenders increased theirs.[1] In short, a slow transfer of private debt to public debt was occurring without a corresponding resolution to the underlying debt crisis.

When the Bush administration assumed office in 1989, the new Secretary of the Treasury, Nicholas Brady, announced that the only way to address the sovereign debt crisis was to encourage the banks to engage in "voluntary" debt-reduction schemes. Countries were to implement market liberalizations in exchange for a reduction of the commercial bank debt, and, in many cases, new money from commercial banks and multilateral agencies. Initial skepticism abounded and much remained into the early 1990s. One observer noted that the plan could be "compared to an offer to sell fire insurance at bargain rates in a town where half the people are arsonists" (Meltzer 1989: 71).

However, the current prevailing view sees the Brady Plan as a success.[2] Since 1989, Latin American nations (the main targets of the plan) have moved aggressively toward the free market, introducing far-ranging reforms, and have begun attracting impressive levels of finance again from the international capital markets. Many analysts believe that in a number of important countries the debt problems

[1]Cline (1995: 229, 230) uses different data on the stock of private and official creditor loans that make it look "less like the banks were being bailed out." He concludes, nevertheless, that "it is a matter of value judgment whether the rising public-sector share over the 1980s represented bailing out the banks or restoring more balance to the lending shares."

[2]See Cline (1995), for example, and Roett (1992: 132) who explained that "By the end of 1991 it was clear that the Brady Plan . . . was the only feasible policy response for dealing with the outstanding stock of debt."

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of the 1980s have been overcome; debt remains, but it is manageable under the dramatically changed conditions of the early to mid-1990s.

How the Brady Plan Works

The Brady Plan was intended to be more flexible than previous plans in dealing with individual countries' characteristics and creditors' desires. To understand how the plan worked, it is useful to examine the first of such deals reached in principle with Mexico in 1989. Although William Rhodes, a top Citicorp executive, proclaimed, "I would not say that Mexico is going to be a cookie cutter for others," Mexico indeed proved to serve as the prototype of Brady deals with other countries.[3]

An advisory committee, consisting of the Mexican government and representatives of more than 500 banks, negotiated a "menu," or set of conditions that banks could choose from to reduce or increase their exposure. Three options were on the menu. Existing loans could be swapped for 30-year debt-reduction bonds that would provide a discount of 35 percent of face value (the bonds would have an interest of 13/16 percentage point above the London Interbank Offer Rate, LIBOR). Existing loans could also be swapped for 30-year par bonds that would effectively reduce Mexico's debt service on those loans through a below-market interest rate of 6.25 percent. Banks could also provide new loans at market interest rates over a four-year period of up to 25 percent of their 1989 exposure, taking into account any discount or par bonds obtained. The three options allowed creditor banks to set their exposure to anywhere between 65 to 125 percent of its pre-Brady level (Unal, Demirguc-Kunt, and Leung 1992: 3).

In the Mexican deal, banks chose to swap 49 percent of their loans for discount bonds, 41 percent for par bonds, and 10 percent to provide new money. Commercial debt worth $48.9 billion (medium- and long-term) was covered under the deal. In exchange for forgiving part of Mexico's debt, the principal and interest of the new bonds banks received were securitized by U.S. Treasury bonds, which were in turn financed by the international financial organizations (ibid.: 2, 4).

The general structure of subsequent Brady deals was based on the Mexican arrangement; differences came up mostly in regard to percentages of debt reduction or new money provisions, interest rates, and final bank preferences. Among the countries that followed Mexico in arranging Brady deals were Costa Rica (1989), Venezuela (1990), Uruguay (1991), Argentina (1992), and Brazil (1992). By May 1994,

[3]Quoted in Bartlett (1989).

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18 countries had agreed to Brady deals forgiving $60 billion of debt and representing about $190 billion in bank claims (long term). Under the plan, the World Bank and the IMF would provide $12 billion each, and the Japanese Import-Export Bank would provide about $8 billion for securitization; most of that money has already been committed for that purpose. The typical deal led to about 30 to 35 percent forgiveness of a country's debt (Cline 1995: 17).

Criticisms

Early criticisms of the Brady Plan were mainly of two sorts. Many complained that the plan did not provide enough debt-forgiveness to benefit the countries in question, and that the commercial banks were not burdening their fair share. Jeffrey Sachs (1989), for example, believed that at least 40 percent debt reduction was needed for the Brady Plan to work because anything less would not restore a country's creditworthiness. Kenneth Rogoff (1993: 753) argued that banks benefited at the expense of developing countries because debt forgiveness improved the creditworthiness of borrowers, thus pushing up the value of the remaining debt and the amount banks could be expected to receive.

Others complained that not enough money was being provided by official lenders. One banker protested, "They ask us to cancel 50 percent of our loans, and then expect us to put in new money with no guarantees. That's crazy!"[4] Rhodes (1990), Citicorp's chief debt negotiator, called for more money to be provided by the IMF and the World Bank as part of the debt negotiations, and suggested, "Public sector resources to support debt reduction are failing to meet the expectations of some countries."

The tensions between those who wanted to force banks into more debt reduction and those who thought taxpayers should ultimately help reduce the debt arose in large part because the Brady Plan was driven by political, not market, considerations. Washington saw the issue as a security and geopolitical concern. Whether to pursue the Brady strategy or not was to "choose democracy or debt." Indeed, the bloody riots in Caracas, Venezuela, in early 1989 reinforced the view that adjustment by highly indebted countries would be destabilizing without an active debt reduction strategy.

Nor can the Brady Plan be described as "voluntary," despite official use of the term. Officials used various techniques to pressure banks into Brady deals. In early 1989, for example, the Treasury Department

[4]Quoted in Rowen (1989a).

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eliminated some tax advantages of recognizing losses on foreign loans and added that banks may see that those advantages lessen in the future (Saunders 1989: 144). Additionally, during their meeting in July 1989, leaders of the G-7 industrialized countries released a communique specifying, "Banks should increasingly focus on voluntary, market-based debt and debt-service reduction operations, as a complement to new lending."[5] Architects of the Brady Plan, however, had more than friendly advice in mind in encouraging such an outcome. Specifically, the World Bank and the IMF, contrary to past practice, could now begin lending to nations that had not in fact reached binding agreements on past debt problems with their commercial bank creditors (Kampffmeyer 1989: 9).

The politicization of commercial bank lending practices under the Brady Plan was consistent with past U.S. policies. During the 1970s, for instance, U.S. officials praised banks for recycling petrodollars to the developing world. They also allowed banks to avoid complying with laws that limited a bank's loans to a borrower to 15 percent of the bank's capital. Thus loans to an assortment of state institutions owned by a foreign government were all treated as individual loans until regulators enforced the lending limits after the outbreak of the debt crisis (Schwartz 1989: 15 and Monteagudo 1994: 75).

Of course, truly market-based approaches to resolving the debt crisis would involve no taxpayer guarantees for debt-reduction and in the 1980s might even have meant that debt forgiveness would be greater than it was under the Brady Plan. That point was implicitly acknowledged by one of the critics of the banks, who urged a coercive debt reduction strategy: "Somebody somewhere has to say to the banks, 'An agreement will be reached and everyone will sign it, or you will all have to write down the value of your loans to their market value.' "[6]

For highly indebted developing countries having trouble honoring their debt obligations, market-based initiatives to reduce debt, including debt buybacks and debt-equity swaps, have proved to be effective. Indeed, both debtors and creditors stand to benefit from such schemes if the revenue streams from debt repayments are not kept up because of debtor inability to do so. That appears to have been the case with many Baker and Brady Plan countries.

Krugman (1989: 263–66) explains that if the debt overhang is too large, it behaves as a tax on a developing country's investment and growth. Under such conditions, the ability to service debt diminishes.

[5]Quoted in Rowen (1989b).
[6]Quoted in Bartlett (1989).

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The "debt Laffer curve" Krugman describes suggests that if a country is on the wrong side of the curve, (i.e., it has too much debt), creditors' expected claims will be lower than if a country were on the correct side of the curve (i.e., it has a manageable amount of debt that does not depress investment). Thus, a creditor will benefit by forgiving some debt if a country is deemed to be on the wrong side of the curve. The difficulty, of course, is determining what side of the debt Laffer curve a country is on.

That evaluation, however, should be left up to market participants. Creditors, after all, will be most sensitive to a country's candidacy for debt forgiveness. However, countries whose debts are not forgiven may choose to buy back their debt on the secondary market, thus granting themselves effective debt forgiveness. If a country's debt trades at a considerable discount in the secondary market, the amount forgiven can be substantial. Barry Eichengreen and Richard Portes (1989: 82) indicate that many Latin American countries benefited from such schemes in the 1930s. In this way, Bolivia retired 5 percent of its debt at 16 cents on the dollar, Colombia retired 22 percent at 22 cents, Chile 18 percent at 59, and Peru 31 percent at 21.

Naturally, such a course of action may disturb creditors because borrowers are using reserves to lower their own debt rather than honor the senior debts owed to the creditors. The predictable effect is to dampen future access to the capital markets. A developing country, therefore, is not automatically inclined to follow that approach and indeed often has strong reputational incentives to negotiate debt payments with creditors.[7]

For countries that have little or no hard currency reserves to repurchase debt or remain current on debt payments, debt-equity swaps are a viable option. Under that scheme, debtor governments buy bank claims at a discount in local currency (or other financial instruments) to be used to purchase equity in the debtor countries (Monteagudo 1994: 69).

The market-based solutions described above are often supplanted because of politicization or concerns that they are inadequate in addressing sovereign debt issues. The most frequent charge by supporters of government-sponsored debt-reduction schemes is that although creditors may benefit from debt forgiveness, they individually face incentives not to forgive debt since forgiveness by one creditor will benefit all others. The "free rider" phenomena, it is said, prevents

[7]For a discussion of the importance of sovereign-government reputation in the capital market under market conditions (i.e., no official coercion to settle debts), see English (1996: 259–75).

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a market solution from occurring. As Roland Vaubel (1983: 299) explains, "This problem, however, has often been solved: the creditors either combine in consortia (clubs) or individual creditors make their offers conditional on the conclusion of similar contracts with other creditors. It is conceivable that creditors would ask the Fund to act as their coordinating agent in such negotiations, but this does not mean that the IMF itself should lend." One could replace the "IMF" in Vaubel's sentence with the Treasury Department, the World Bank or any other government agency.

But the Brady Plan did interject taxpayers into the debt workouts. The plan's immediate effect appeared to be detrimental. In 1989, the Institute of International Finance (IIF) correctly complained that expectations about debt-forgiveness under the Brady Plan had led countries to build up payments arrears to commercial banks. The IIF also charged that the Brady Plan encouraged the slowing down of voluntary debt reductions from $18.3 billion in 1988 to $11.3 billion in 1989 (Fidler 1990: 3).

Melanie Tammen (1990: 260) also noted that debt equity swaps, which had been increasingly popular in the years previous to the Brady Plan, diminished upon its announcement. By 1989, Brazil, Argentina, the Philippines, and Ecuador suspended or significantly reduced debt-equity auctions. Indeed, as Table 1 shows, total debt conversions fell significantly in 1989.

While the Baker Plan failed to mobilize significant new lending on the part of the banks, the banks were undertaking market-based debt reduction schemes of their own. From the end of 1985 to the end of 1988, for example, banks retired $26 billion worth of debt through debt-equity swaps, exit bonds, debt-buybacks, and discount restructurings (Cline 1995: 210).

In addition, as a response to the Brazilian default on its debt in 1987, Citibank announced that it was building up its loan-loss reserves of $3 billion, representing about one-fourth of its sovereign debt (ibid.: 213). That action weakened not only Brazil's negotiating position with Citibank, but also that of all highly indebted nations Citibank dealt with. It also prompted other money-center banks to follow suit, thus further weakening the negotiating position of developing country governments. The response of the banks to the Brazilian default and the possibility of default by other debtors occurred without significant official intervention.

By the time the Brady Plan was announced, therefore, progress in market-based debt reduction was notable. As George Melloan (1989: A25) observed at the outset of the Brady Plan, "Clearly, the market has come a long way on its own." Given the debtor nations' weakened

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TABLE 1

DEBT CONVERSION INSTRUMENTS, 1985–1994
(Millons of Dollars)

Instrument	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 Amount	1985–94 Percent
Debt equity swaps	570	882	3,578	7,567	6,981	9,624	2,823	8,148	4,586	248	45,007	40.4
Debt buyback or exchange	0	0	0	1,830	1,011	12,347	1,006	9,026	7,106	20,033	52,359	47.0
Local currency payments	0	63	87	3,580	2,269	5,242	800	342	0	2	12,385	11.1
Local currency conversions	156	438	796	1,535	1,512	1,540	1,443	1,217	127	3	8,767	7.9
Private sector restructuring	89	279	3,454	4,341	3,113	337	788	371	293	0	13,065	11.7
Total debt conversions	815	1,662	7,915	18,853	14,886	29,090	6,860	19,104	12,112	20,286	111,297	100.0

SOURCE: World Bank (1996: 87).

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bargaining position vis-à-vis the banks, moreover, and their worsening domestic economic situations, debtor nations had little alternative but to introduce real market reforms by the end of the decade. The immediate effect of the Brady Plan, however, was to bring about a pause in that trend.

Finally, from the perspective of the mid-1990s, it is worthwhile evaluating whether the goals of the Brady Plan were accomplished. The most authoritative and generally laudatory assessments of the Brady Plan were produced by William Cline in early 1995. Cline cites the success of the Brady Plan by measuring performance of Brady countries in economic growth, price stability, lowering of interest rates, and return to capital markets.

Alas, it appears that there is no correlation between Brady Plan deals and positive economic indicators. Some Brady countries like Argentina and Mexico (until late 1994) performed quite well, while others, such as Venezuela or Nigeria (Brady Plan initiated in 1992) have performed dismally; still others, such as Brazil, have performed erratically. Of course, many other factors besides the Brady plan affect a country's economic progress or direction. It is precisely for that reason that the Brady Plan cannot confidently be claimed a success.

But while there is no correlation between the Brady Plan and positive economic indicators, there does appear to be a correlation between market reforms and positive indicators. Colombia and Chile, countries that did not agree to undertake Brady deals, have fared notably well. The case of Chile is even more remarkable as Chile was a severely indebted country during the debt crisis of the 1980s but has since become a free-market model for other Latin nations. Since 1990, Peru has also successfully emerged from severe economic crisis through widespread and radical free-market reforms without the aid of a Brady deal (although in the fall of 1995 it agreed in principle to engage in one and did so in late 1996). These last two cases call into question the very need for a Brady Plan in the first place if the goal is to create a growing market economy.

In the end, progress and setbacks in developing nations appear to depend on an assortment of domestic factors. Private creditors, rather than official entities, are in the best position to judge those factors, to act on them, and to accept the responsibility for allocating credit and all of the consequences that that implies. The Brady Plan, although disguised in market rhetoric, has prevented a genuine, private solution to an ongoing debt problem. It is time to allow private creditors to negotiate their problems directly with their debtors—a conclusion

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that subsequent events, such as the Mexican peso crisis of 1994, does not alter.[8]

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[8]For a discussion of the Mexican peso crisis and the response to it, see Hoskins and Coons (1996: 139–64).

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The Effect of Welfare on High School Graduation

Howard Gensler

Higher welfare support levels diminish the relative value of education according to standard economic theory. However, studies based on the negative income tax experiments have found that higher welfare support levels increase participation in the educational system. This study examines a nonexperimental source of data to determine the effect of higher expected state-level welfare benefits on high school graduation rates for the chief recipients of welfare, single mothers. A nationwide sample of 18 to 25 year-old single mothers is analyzed. The hypothesis that higher welfare levels adversely impact high school graduation rates is confirmed with a high degree of statistical precision.

Economists predict that educational levels will decline as welfare levels increase. The reasoning behind this hypothesis is that education is expensive to acquire in both time and money. Education improves one's future earning capacity. One invests in education today to receive a higher salary in the future. As the welfare system becomes more generous, the difference between income levels while working and income levels while not working diminishes, thereby reducing the incentive to invest in education. Experiments with the negative income tax, however, consistently dispute this prediction. One could argue that, since the experiments were temporary, participants may have been acting strategically by taking advantage of the temporarily higher support levels to invest in education so as to earn more income when welfare levels were expected to decline on termination of the experiment.[1]

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[1]For studies analyzing the impact of welfare on education, see Mallar (1976); McDonald and Stephenson (1979); Venti (1984); and Weiss, Hall, and Dong (1980). For criticisms of experimental studies, see Greenberg et al. (1981); Hausman and Wise (1979); Keeley and Robins (1980); Killingsworth (1983); and Metcalf (1973, 1974).

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The Data

The data source is the U.S. Bureau of the Census *Current Population Survey: Annual Demographic Survey* (March Supplement, 1980–91).[2] This data source is a large, random sample of the United States regularly used by the federal government and analysts in economic studies and forecasts. Lower-income people are overrepresented in the sample, making it a particularly appropriate data set to use in an empirical study of the behavioral effects from welfare. Economic and demographic information is provided for noninstitutionalized civilians. The data herein are further restricted to a sample of low-income, nonfarm, nonmilitary single female household heads with at least one dependent child under the age of 18 and no man present in the home. Alaska and Hawaii were excluded because of higher local price levels and unique geographic isolation. The single female household heads were limited to range in age from 18 to 25. The sample included 6,111 observations. The average age of the sample of women is 21.6 years. The subjects have an average educational level of 11.1 years and an average of 1.7 children; 37 percent were black; 54 percent worked; and 62 percent participated in the income maintenance system. Table 1 provides a detailed description of the sample.

Comprehensive Welfare Statistics

The cash or cash-equivalent income maintenance system in the United States consists of Aid to Families with Dependent Children (AFDC), food stamps, general assistance, emergency assistance, and the low income home energy assistance program.[3] Welfare consists of a guarantee level that increases with family size, and a tax rate on earned and unearned income. These five programs are aggregated in a comprehensive welfare model:

$$W_i = \alpha + \beta K_i + t_y Y_i + t_v V_i + \mu_i, \quad (1)$$

where W_i is the actual amount of welfare received; K_i is the number of dependent children in the home; Y_i is earned income; V_i is unearned income excluding welfare benefits; and μ_i is a mean-zero random error term. Since welfare benefits cannot fall below zero, a limited-

[2]The original collector of the data, the U.S. Census Bureau, and the distributor of the data, the Inter-university Consortium for Political and Social Research, bear no responsibility for uses of this data, nor for interpretations or inferences based on such uses. The opinions, analyses, and conclusions are solely those of the author.

[3]Although there are housing programs that are effectively cash-equivalent, their valuation is controversial and they have been excluded here. Less than 6 percent of the sample received housing benefits, so the effect of the understatement will be small.

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TABLE 1

LOW-INCOME SINGLE FEMALE HOUSEHOLD HEADS 18–25 YEARS OLD, 1979–90

Variable	All	Grads	Nongrads	Black	Nonblack	Welfare	Nonwelfare
Age (years)	21.6	22.0	21.2	21.5	21.7	21.7	21.6
Education (years)	11.1	12.3	9.5	11.4	11.0	10.9	11.5
High School Grad. Rate (%)	56.7	100	0	59.1	55.2	50.1	67.4
Labor Supply (hrs/yr)	576	733	371	453	649	354	941
Labor Participation (%)	54	63	42	46	59	43	72
Welfare Participation (%)	62	54	71	72	55	100	0
Housing Subsidy Participation (%)	7.0	6.9	7.2	7.9	6.4	11.3	0
Children (number)	1.70	1.55	1.89	1.91	1.57	1.86	1.43
Black (%)	37	39	35	100	0	43	27
Total Income ($/yr)	8,661	9,195	7,962	8,644	8,622	8,121	9,550
Earned Income ($/yr)	3,011	3,935	1,801	2,360	3,397	1,651	5,248
Unearned Income ($/yr)	2,578	2,864	2,204	2,614	2,557	1,531	4,302
Welfare ($/yr)	3,072	2,396	3,957	3,754	2,668	4,939	0
Observations (number)	6,111	3,464	2,647	2,276	3,835	3,801	2,310

NOTE: All dollar values in constant 1990 terms.

SOURCE: U.S. Bureau of the Census, *Current Population Surveys: Annual Demographic Files, 1980–91.*

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dependent variable regression, the tobit procedure, was used to estimate the model. Here, α is interpreted as the guarantee level for the single female household head; β is the incremental guarantee allowed per child; t_y is the welfare tax rate on earned income; and t_v is the welfare tax rate on unearned income.

Equation 1 was estimated using data for each state from the *Current Population Survey: Annual Demographic Survey* for each year from 1979 to 1990 for adult single female household heads of nonretirement age (Gensler 1993). The descriptive statistics provide a nonexperimental source of comprehensive welfare information derived from a randomly collected nationally representative sample. For the sample analyzed herein, the average expected guarantee level for a mother with two children in constant 1990 dollars was about $4,290 per year. The tax rate on earned income averaged 57 percent, and the tax rate on unearned income averaged 35 percent.

A Decision Theoretic Model of High School Graduation

To determine the effect of the income maintenance system on high school graduation rates, I model the decision to complete high school as a latent variable, discrete binary choice decision. A subject decides either to complete high school or to drop out of high school. The decision itself is based on a marginal cost/benefit estimation that assesses whether the benefits of graduating from high school (such as greater employment opportunities) outweigh the costs (such as time, boredom, and risks to personal safety and dignity from assaults from fellow students). The marginal cost/benefit estimation itself is unobserved. Only the behavioral response to the estimation, graduating from high school or dropping out, is observed. It is assumed that a number of personal demographic characteristics and environmental conditions, including the welfare system, affect this decision. The difference between the cost and benefit can be represented by an unobserved variable, G^*, which is dependent on observable characteristics and an error term: $G^* = \beta'X + e_g$, where X is a vector of observable characteristics, and e_g is assumed to be a mean-zero normally distributed random error term. Here, $\beta'X$ is the index function. Although G^* is unobserved, the decision to graduate, G, is observed: $G = 1$ if $G^* > 0$, and $G = 0$ if $G^* \leq 0$. The probability that $G = 1$ is $\text{Prob}[G^* > 0] = \text{Prob}[\beta'X + e_g > 0] = \text{Prob}[e_g > -\beta'X]$. Since the error term is assumed to be symmetric, $\text{Prob}[G^* > 0] = \text{Prob}[e_g < \beta'X] = \Phi\ \beta'X$ where Φ is the normal cumulative distribution function. This is the functional form of a probit model. Accordingly,

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the decision to participate in the welfare system can be estimated by means of a probit procedure.

The estimation process proceeds as follows: The model of high school graduation is estimated by means of a probit procedure using full information, maximum likelihood techniques on the entire sample of low-income, single female household heads which includes both graduates and nongraduates. The descriptive welfare statistics of each state's overall income maintenance system by year is included in the estimation. The subject's race is controlled for by means of a dummy variable (1 for black, otherwise 0). Because completing high school is a time-intensive activity, additional years beyond the subject's 18th birthday are included. The prospect of outside nonwelfare support is controlled for by including unearned, nonwelfare income. That form of income most likely represents gifts from parents, child-support, or scholarships. The employment conditions are represented by the state unemployment rate and state per capita income. Table 2 provides definitions for the variables. The resulting model of high school graduation is:

$$(2) \quad \text{Grad} = \beta_0 + \beta_1 W + \beta_2 TY + \beta_3 TV + \beta_4 R + \beta_5 \text{Maj} + \beta_6 UY + \beta_7 U + \beta_8 PCI + \upsilon,$$

where υ is a mean zero random error term. Table 3 presents the maximum likelihood estimates of the coefficients for the high school graduation model determined by the probit procedure.

TABLE 2

VARIABLE DEFINITIONS

Variable	Definition
W	Effective welfare guarantee level by state, year, and family size in constant 1990 $1,000s per year.
TY	Effective welfare tax rate on earned income by state and year.
TV	Effective welfare tax rate on unearned income by state and year.
Maj	Years of majority = Age–18.
R	Race dummy variable = 1 if black, 0 otherwise.
UY	Unearned nonwelfare income in constant 1990 $1,000s per year.
U	State unemployment rate by year.
PCI	State per capita income by year in constant 1990 $1,000s per year.

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TABLE 3

MAXIMUM LIKELIHOOD ESTIMATES FOR HIGH SCHOOL GRADUATION MODEL: PROBIT ANALYSIS OF SINGLE FEMALE HOUSEHOLD HEADS

Variable	Coefficient	Std. Err.	*t*-statistic	$p>\|t\|$	Marg. Prob.
W	−.05158	.00838	−6.157	0.000	−.0337
TY	.00093	.00114	.821	0.412	.0006
TV	.00253	.00090	2.805	0.005	.0017
Maj	.13426	.00738	18.182	0.000	.0877
R	.19194	.03527	5.443	0.000	.1254
UY	.03058	.00322	10.895	0.000	.0032
U	.00893	.00833	1.072	0.284	.0006
PCI	−.01899	.00725	−2.621	0.009	−.0124
Constant	.08934	.14274	10.895	0.000	—

NOTE: Number of observations: 6,111; dependent variable: high school graduation (1 if graduate, 0 otherwise); log of likelihood function: initial −4,181, at convergence −3,923; overall significance of model: $chi^2(12) = 1{,}459$. See Table 2 for variable definitions.
SOURCE: U.S. Bureau of the Census (1980–91).

Estimation Results

The marginal probabilities are provided as well as the coefficients from the estimation. The marginal probabilities indicate the magnitude of the change in the high school graduation rate from a one unit change in the independent variable. Since these effects are nonlinear, extrapolation beyond one unit quickly becomes suspect. The income maintenance system's guarantee level does, in fact, have a statistically significant negative impact on high school graduation rates, as predicted by economic theory. A $1,000 increase in the guarantee level would decrease the high school graduation rates of low income, single mothers by about 3 percent. That represents a large increase in welfare and a small but nontrivial decline in graduation rates. The implicit welfare tax rates have a trivial or statistically insignificant impact on graduation rates. The impact on graduation rates from the tax rate on earned income is statistically insignificant. The effect from unearned income tax rates is statistically significant, but trivial in magnitude. A 10 percentage point increase in the unearned income tax rate would increase high school graduation rates by less than two-tenths of 1 percent. Samuel Rea (1977) indicated that the effect from tax rates is ambiguous.[4] Estimation demonstrates that as a substantive matter it is zero.

[4]The effect of implicit welfare taxes is ambiguous due to opposing substitution and income effects (Rea 1977: 612).

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The age factor is statistically significant and demonstrates that for this demographic group additional time beyond the normal 18 years is needed to complete high school. In this low-income sample, blacks averaged over one-third year more education than similarly situated nonblacks. Estimation indicates that blacks have a 12 percent higher high school graduation rate than similarly situated low-income nonblack single mothers. Note that the effects of unearned income were quite significant even if small. The unemployment rate was statistically insignificant. State per capita income had a trivial effect. Both the estimated effects from unearned income and state per capita income were of the opposite sign from theoretical expectation. Increases in unearned income reduce the incentive to complete high school. Since this is a low-income sample, increases in unearned income may indicate higher levels of child support, which may correlate positively with continued education (i.e., the absent father may be more likely to make child support payments where the child remains in school). Higher per capita state income should increase the level of education since education would have a greater return in a more developed economy. Of course, both these counterintuitive effects are very small.

Conclusion

The theoretical predictions of economic theory are confirmed by the analysis. Increases in the welfare system do not promote accumulation of human capital. The findings of the negative income tax experiments that increases in welfare promote education would appear to be a result of short-term strategic behavior as predicted by standard economic theory. The impact on educational levels is fairly small and may be able to be counteracted with appropriate programs and incentive structures such as scholarships, time limitations, and other subsidies. However, the basic negative relationship between welfare and education must be understood before effective public policies concerning welfare, education, and poverty can be formulated. Although these findings contrast with much of the empirical literature, the very large sample, the nonexperimental nature of the sample, the comprehensiveness of the measure of welfare, the high degree of statistical significance, and the conformity with standard economic theory lend substantial credence to the results.

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Does Money Still Matter?

Willis L. Peterson

The basic tenant of the quantity theory, that money matters, has been challenged by a number of recent empirical studies. Benjamin Friedman and Kenneth Kuttner (1992) report that the empirical relation between money and economic activity appears to have changed after 1970, with money now playing a less important role. In an earlier study, Robert Gordon (1982) finds little evidence that anticipated changes in the money supply affect real output. And contrary to Milton Friedman's (1968) admonition that instability in the rate of growth of the nation's money supply has caused large and damaging fluctuations in economic activity, Robert Litterman and Laurence Weiss (1985) find that monetary fluctuations have not been a major factor causing instability in the economy.

Using the Granger causality test, Christopher Simms (1972) found that causality runs entirely from money to GNP without feedback. However, in a later study Simms (1980: 250) reports that "a nonmonetarist explanation of the dynamics, based on the role of expectations in investment behavior, seems to fit the estimated dynamics better." In a more strongly worded conclusion, Christopher Niggle (1991) argues that monetarist rules are nonsensical because the money supply is determined endogenously by the interaction of banks and borrowers. In other words, even if money does matter, the monetary authority cannot stabilize the economy or influence economic activity because of an inability to manage the money supply.

In the original quantity theory, money (M) has a direct impact on nominal income (Y or GDP). Since the quantity equation of exchange,

$$MV = Y, \tag{1}$$

is an identity, in order for a change in M to not change Y, the income

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velocity of money (V) must change proportionally in the opposite direction. Is that plausible?

This question is addressed by the new quantity theory as set forth by the Cambridge equation,

$$M = kY, \tag{2}$$

where k (1/V) is the proportion of nominal income held as money (Friedman 1956). If people are holding the desired equivalent of their annual income as money, a change in M creates disequilibria. For example, an increase in M causes actual k to exceed desired k, unless desired k increases for some reason. If desired k does not increase, equilibrium is reestablished by an increase in GDP, not by a decrease in M; all money must be held by someone. The increase in Y comes about by an increase in spending as people attempt to draw down their monetary assets. The opposite occurs if M decreases. Now actual k is less than desired k. To build up their money balances, people decrease their rate of spending, thereby reducing Y, and reestablishing equilibrium k.

The main use of the new quantity theory is to explain and predict changes in k or V. Consider an increase in M that exceeds the growth of real output. There will be inflationary pressure, unless desired k increases (V decreases). But during inflation money becomes a less desirable asset to hold. Therefore asset holders will attempt to decrease k rather then increase it. Although individuals can rearrange their asset mix, away from money in favor of other assets, in the aggregate they cannot. Yet asset holders can reestablish equilibrium to the new, smaller desired k by increasing Y, that is by spending at a faster rate as they attempt to draw down their monetary balances. Thus any change in k or V that occurs because of an increase in the growth rate of M can be expected to accentuate rather than mitigate the effects of the change. However, growth rates of M probably have to exceed what has been experienced by the United States for this phenomenon to have a noticeable effect.

In the event of a decrease in M, or a decrease in its rate of growth, the opposite can be expected. If actual k falls below desired k, agents can reestablish equilibrium by spending at a slower rate, causing Y to decrease, or at least decrease its rate of growth. If unemployment threatens, they may try to build up their cash balances—that is, increase desired k. They can do so by decreasing their rate of spending causing a smaller Y than would otherwise occur. Thus, an attempt to increase desired k, or decrease V, also accentuates the dampening effect of the original tight money situation. Consequently we should

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expect k to increase, V decrease, in times such as the Great Depression, which it did.

Since the new quantity theory predicts that any change in k or V that occurs because of a change in the growth rate of M will accentuate rather than mitigate the after effects, the results reported by the aforementioned empirical studies stand in contrast to the quantity theory—the original and the new. Either the empirical studies are reporting erroneous results, or the quantity theory is wrong.

This paper has three objectives: (1) to report the results of conducting a statistical test of the quantity theory, with particular emphasis on whether the relation between money and nominal GDP has changed over time, (2) to present economic evidence bearing on the causality question of whether money is endogenously determined, and (3) to provide evidence from an estimated labor market model on whether money is neutral or non-neutral in its effect on unemployment.

Statistical Test of the Quantity Theory

By necessity, empirical work on the impact of money on economic activity must utilize aggregate, time-series data. The problems of using such data are well known: serial correlation, multicollinearity, lack of relative variation among the variables, and spurious correlation due to trend. To mitigate those problems, a first difference equation of the quantity equation of exchange is estimated:

$$\dot{Y} = A + b\dot{M}, \tag{3}$$

where the dots indicate annual percent change of the variables. In this case b is an elasticity rather than a velocity—the percentage change in nominal income associated with a 1 percent change in the money stock. Although it is asking a lot of the money variable to predict changes in a rate of change of GDP, a statistically significant b coefficient represents a robust test of the theory.

The time period considered is 1929 to 1994, omitting 1940–48, the World War II years and the immediate postwar adjustment period. The wide variety of economic conditions that existed over this period, ranging from the Great Depression of the 1930s to the double-digit inflation of the 1970s and the recessions of the early 1980s and 1990s, yields data with enough variability to conduct a meaningful test of the quantity theory.[1]

[1]All data utilized in this study are from the *Economic Report of the President* (1969 and 1994) except the pre-World War II money data and data on deposits in postal savings banks and mutual savings banks, which are from Friedman and Schwartz (1970).

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The proper definition of money remains an unsettled issue. Basically, this is an empirical question: Which definition is the best predictor of GDP? Here three definitions of money are utilized: M1, M2+, and MD. M1 is currency plus demand deposits. M2+ is defined as M2 plus large denomination time deposits and deposits in thrift institutions, including postal savings and mutual savings banks deposits, which were relatively important in the early part of the period. MD is the difference between M2+ and M1:

$$MD = M2+ - M1. \tag{4}$$

Because the annual percentage rates of change between M1 and MD are not highly correlated over the study period ($r = .31$), these two components of M2+ can be inserted as separate variables in the regression. If the less liquid forms of money included in MD are not important determinants of economic activity, the coefficient on MD should be small and insignificant.

Two lag structures of the effect of money on nominal GDP were tried: the percentage change in M from the preceding year, $(M_t - M_{t-1})/M_{t-1} \times 100$, and the percentage change from two years back, $(M_t - M_{t-2})/M_{t-2} \times 100$. In the quantity theory regressions the shorter lag yielded larger t-ratios and R^2s. Hence the shorter lag is utilized throughout the paper. Also to correct for serial correlation, all regressions are estimated by the auto-regressive Cochrane-Orcutt technique. Finally, all equations contained a constant term which is not shown because of its irrelevance.

As shown in columns 1 and 2 of Table 1, M2+ is a better predictor of GDP than M1. Column 3 shows the results of inserting a slope dummy on M2+ for the 1930–69 period. During the 1970s and 1980s there were large changes in the composition of M2+, away from currency and demand deposits in favor of less liquid forms (Table 2). Possibly the finding that money is no longer an important determinant of economic activity is due to the use of an improper definition. The coefficient on M2+ of .782 reflects the relationship between M2+ and GDP over the 1970–94 period. Although the slope dummy is positive, indicating a slightly larger coefficient on M2+ for the 1930–69 period, it is not statistically significant. From this result, it appears that the relationship between M2+ and GDP has been relatively stable over the 57-year period under consideration.

The regression results obtained when M2+ is divided into the two components, M1 and MD, are shown in column 4 of Table 1. It is noteworthy that the M1 coefficient increases in size and significance when MD is added to the equation. This suggests that statistical estimates of the quantity equation, or other relations involving money,

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TABLE 1

STATISTICAL TEST OF THE QUANTITY THEORY: FIRST-DIFFERENCE EQUATIONS

Independent Variables	Regression Coefficients[a]				
	(1)	(2)	(3)	(4)	(5)
% Δ M1	.259 (1.81)[b]			.458 (4.05)	.366 (1.97)
% Δ M2+		.809 (6.82)	.782 (5.27)		
% Δ MD				.531 (6.36)	.656 (4.28)
% Δ M2+D3069			.066 (.422)		
% Δ M1D3069					.188 (.853)
% Δ MDD3069					−.181 (−1.11)
R^2	.374	.521	.522	.533	.566
D.W.	2.15	2.05	2.04	2.03	2.04

[a]The dependent variable for each equation is the annual percentage change in nominal GDP.
[b]Figures in parentheses are *t*-ratios.

TABLE 2

PROPORTION OF M1 IN TOTAL U.S. MONEY SUPPLY

1929–34	.602	1970–74	.284
1935–39	.680	1975–79	.229
1949–54	.603	1980–84	.168
1955–59	.510	1985–89	.141
1960–64	.403	1990–94	.162
1965–69	.335		

can result in specification bias if the less liquid forms of money are omitted from the equation(s). Also the MD coefficient is larger than the M1 coefficient, implying that the less liquid forms of money are even more important determinants of nominal GDP than M1. The

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sum of the M1 and MD coefficients of .989 shown in column 4 suggests that annual percentage changes in money, broadly defined, are nearly proportional to changes in nominal GDP.

The statistically insignificant slope dummies for both M1 and MD coefficients shown in column 5 come as something of a surprise considering the large change that has occurred in the composition of M2+ over this period. As shown in Table 2, M1 accounted for over 60 percent of the total money supply in the immediate pre- and post-WWII period, declining to about 15 percent in the 1980s and 1990s. In any case, the relation between both M1 and MD and nominal GDP appears to have been relatively stable over the 1929–94 period.

The Causality Question

Whether money affects economic activity or vice versa, remains an unsettled issue. As an alternative to the Granger test of causality, which is purely statistical and devoid of economic content, one might ask what economic conditions are consistent with the hypothesis that changes in the money supply are determined endogenously by autonomous changes in consumer, investor, or government spending. An increase in the propensity to spend by one or more of these groups, at any given income level, could stimulate bank lending and increase the money supply along with GDP. Changes in imports or exports also could affect bank deposits and the money supply.

To test that hypothesis, annual percentage changes of the following variables are regressed on annual percentage changes in M1 and MD over the 1929–94 period:

APC = consumer spending/disposable income,
API = investment spending/private saving,
APG = federal government spending/GDP,
APD = federal government spending/revenue,
IM = nominal imports,
EX = nominal exports.

If year-to-year changes in the growth of the money supply are endogenously determined by changes in the propensities to spend by consumers, investors, and the federal government, their respective coefficients should be positive and significant.

Federal government spending financed in part by the purchase of bonds by the Federal Reserve can exhibit a positive coefficient even though the change in the quantity of money is induced by Federal Reserve action. In this case a positive coefficient on the federal spending/GDP variable would be consistent with the hypothesis of an endog-

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enously determined money supply growth but would not be a definitive text of the hypothesis. Hence, the variable APD (average propensity to incur a deficit) is added to "hold constant" the effect of "printing money" to finance federal government deficits. The regression results are presented in Table 3. The same data used for the Table 1 regressions are utilized here.

As shown in Table 3, the coefficients on the private consumer and investment spending propensities are negative for both M1 and MD, and for MD they are highly significant. The coefficients on federal government spending are negative but not statistically significant. The trade coefficients are statistically insignificant. The negative coeffi-

TABLE 3

A TEST OF THE HYPOTHESIS THAT THE MONEY SUPPLY IS ENDOGENOUSLY DETERMINED

Dependent Variables	Regression Coefficients[a]	
	(1)	(2)
	% Δ M1	% Δ MD
% Δ APC	−.642	−1.10
	(−1.35)[b]	(−2.70)
% Δ API	−.064	−.163
	(−1.18)	(−3.45)
% Δ APG	−.091	−.101
	(−1.41)	(−1.77)
% Δ APD	.063	−.006
	(1.32)	(−.144)
% Δ IM	.022	−.099
	(.201)	(−.951)
% Δ EX	−.101	−.107
	(−1.13)	(−1.38)
R^2	.253	.639
D.W.	1.80	1.78

[a]The independent variables for the regressions are the percentage change in M1 (column 1) and the percentage change in MD (column 2).
[b]Figures in parentheses are *t*-ratios.

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cients do not support the hypothesis that changes in the money supply are endogenously determined by autonomous changes in private or federal government spending. Nor does international trade appear to exert an influence over the money supply. These results imply that the direction of causation is from money to spending, rather than the other way around.

The results presented in Tables 1 and 3 support the hypothesis that money still matters—that is, the quantity theory is correct and the results reported by the aforementioned empirical studies are wrong.

Sources of Unemployment Variation

Although variations in M1 and MD appear to be important determinants of variations in nominal GDP, the quantity theory cannot tell us how much of the effect is on real output and how much is on prices. If real output is affected by changes in the money supply, money is non-neutral. The principal concern here is the effect of money on unemployment.

Unemployment above the natural rate implies disequilibrium in the labor market which rules out models that require equilibrium conditions. Thus, a reduced-form model of the U.S. labor market is estimated to measure the impact of money on unemployment.

Since the demand for labor is a derived demand, derived from the demand for goods and services, shifts in the demand for goods and services cause shifts in the demand for labor. If money is non-neutral, affecting the demand for goods and services, it should also affect the demand for labor.

Short-run wage stickiness, or incomplete adjustment to labor demand or supply shifts, will result in changes in the gap between the quantity of labor demanded and the quantity supplied, that is, in the unemployment rate. Therefore, a reduced-form, first-difference equation model of the labor market can be written as:

$$\dot{U} = f(\dot{D}_l \dot{S}_l), \tag{5}$$

where $\dot{U}$, $\dot{D}_l$, and $\dot{S}_l$ represent annual rates of change in the unemployment rate, the demand for labor, and supply of labor respectively.

Shifts in the demand for labor can come from two sources: internal (I) and external (E) to the private sector. Thus,

$$\dot{D}_l = g(\dot{I}, \dot{E}). \tag{6}$$

Internal sources are taken to stem from changes in the average propensity to consume (APC) and to invest (API). As defined previously,

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$$APC = \frac{C}{DI} \tag{7}$$

$$API = \frac{GDI}{S}, \tag{8}$$

where, C = consumer spending,
DI = disposable income,
GDI = gross private domestic investment, and
S = gross private saving (households plus firms).

Thus,

$$\dot{I} = h(\dot{APC}, \dot{API}). \tag{9}$$

External sources affecting labor demand include monetary, fiscal, and international trade factors. Monetary forces emanate from changes in monetary policy. Two alternative measures of monetary policy changes are utilized: (1) changes in the money supply (M) and (2) changes in the interest rate (i).

Fiscal forces are measured by changes in federal government spending (FS) and federal taxes (FT). As in the Keynesian and aggregate demand-supply models, changes in federal government spending or taxes can shift the demand for goods and services, thereby shifting labor demand.

Forces affecting labor demand from the trade sector are measured by annual percentage changes in imports (IM) and in exports (EX). The usual argument is that imports cause a reduction in demand for domestic goods, thereby decreasing labor demand and increasing unemployment. The opposite is expected for the effect of exports on labor demand. Thus,

$$\dot{E} = j(\dot{M}, \dot{FS}, \dot{FT}, \dot{IM}, \dot{EX}), \text{ and} \tag{10}$$

$$\dot{E}' = k(\dot{i}, \dot{FS}, \dot{FT}, \dot{IM}, \dot{EX}). \tag{10'}$$

Autonomous factors affecting the supply of labor are proxied by changes in the labor force participation rate (LPR). Short-run increases in this rate could increase the unemployment rate until the new entrants are assimilated into the work force:

$$\dot{S} = l(\dot{LPR}). \tag{11}$$

Combining equations (9) through (11) into equation (5) yields:

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$$(12) \qquad \dot{U} = m(\dot{APC}, \dot{API}, \dot{M}, \dot{FS}, \dot{FT}, \dot{IM}, \dot{EX}, \dot{LPR}), \text{ and}$$

$$(12') \qquad \dot{U}' = n(\dot{APC}, \dot{API}, \dot{i}, \dot{FS}, \dot{FT}, \dot{IM}, \dot{EX}, \dot{LPR}).$$

The results of estimating equations (12) and (12′) are shown in Table 4. The first regression, shown in column 1, incorporates the two money variables, M1 and MD, as indicators of monetary policy, while in regressions (2) and (3) interest rates are used instead. Since changes in short-term nominal interest rates are a function of rates of change of the money supply, it is not correct to include both the interest rate and money as explanatory variables in the same equation.

The annual percentage change of APC exhibits a positive coefficient in all three equations—the higher the unemployment rate the higher is APC. It appears, therefore, that unemployment is not caused by a decrease in desired consumer spending. Although total consumer spending may decline during time of higher unemployment, as in the Great Depression, that does not appear to be due to a decrease in desired spending as measured by APC, but rather to a decrease in money to maintain spending. In fact, APC reached 1.00 in 1933. Since consumer spending accounts for over 80 percent of total private spending, the private sector can be seen as having a stabilizing rather than a destabilizing effect on the economy.

The negative and statistically significant coefficients on both M1 and MD attest to the short-run non-neutrality of money. This does not mean that higher long-term growth rates of money will necessarily yield lower rates of unemployment. In these results it is the change in growth rates that matters.

Although the interest-rate coefficients in regressions (2) and (3) are both positive, neither is statistically significant, in contrast to the results of the Fuhrer and Moore (1995) study. Of the two, the Federal Reserve discount rate is least important, implying that the Federal Reserve should be more concerned about regulating the growth of the money supply than about influencing interest rates.

The coefficients on the two fiscal policy variables, growth rates of federal government spending, and federal taxes, do not come close to being statistically significant in all three regressions. The import variable coefficient also is not statistically significant in all three regressions and is even negative in regression (1). Apparently in years of relatively full employment, consumers purchase more imported as well as domestic goods. In other words, it appears that the U.S. economy drives imports rather than the other way around. The export coefficients have the expected negative sign and are statistically significant in all three equations. Since U.S. exports have traditionally

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TABLE 4

SOURCE OF VARIATION IN U.S. UNEMPLOYMENT RATE 1929–94

Independent Variables	Regression Coefficients[a]		
	(1)	(2)	(3)
% Δ APC	.221 (1.81)[b]	.342 (2.55)	.321 (2.48)
% Δ API	−.070 (−5.10)	−.039 (−2.61)	−.042 (−2.93)
% Δ M1	−.070 (−2.28)		
% Δ MD	−.084 (−3.15)		
Δ int. rate		.415[c] (1.54)	.078[d] (.363)
% Δ fed. spending	.007 (.568)	.008 (.591)	−.009 (.642)
% Δ fed. taxes	−.001 (−.336)	−.0001 (−.056)	.0003 (.009)
% Δ imports	−.005 (−.198)	.036 (1.23)	.029 (1.00)
% Δ exports	−.050 (−2.67)	−.059 (−2.61)	−.053 (−2.23)
% Δ labor participation rate	.473 (1.62)	.467 (1.41)	.442 (1.30)
R^2	.752	.672	.658
D.W.	2.04	2.17	2.19

[a]The dependent variable for each regression is the annual rate of change in the unemployment rate.
[b]Figures in parentheses are *t*-ratios.
[c]Interest rate on Moody's Aaa bonds.
[d]Federal Reserve discount rate.

accounted for less than 10 percent of GDP, possibly the increase in exports during times of decreased unemployment stems from the increase in production for the domestic market.

On the supply side of the labor market, the coefficient for the labor force participation rate, although positive, is not statistically significant.

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It appears that there is ample demand for the output from as many people as wish to participate in the labor force. One might conclude that to maintain full employment, it is not necessary to ration jobs or keep out migrant workers. The total economy is *not* like an individual business firm or industry which faces a limited demand for its product.

Conclusion

In this study money is broadly defined to include M2 plus large denomination time deposits and deposits in thrift institutions, referred to as M2+. Dividing M2+ into two components, M1 and the remainder (MD), each was found to bear a stable relationship to nominal GDP over the 1929–94 period, in spite of large changes in the proportion of each in the total money supply. There is no indication that autonomous changes in consumer, investor, or federal government spending affects the money supply in the same direction. The same is true of international trade. To the contrary, those components of GDP appear to reduce the instability in GDP caused by fluctuations in the rate of growth of the money supply.

The results obtained by estimating a reduced-form model of the U.S. labor market attest to the short-run non-neutrality of money on unemployment. On the other hand, changes in interest rates, federal spending and taxes, imports, and the labor force participation rate do not show up as having a statistically significant short-run impact on changes in the unemployment rate.

Overall, the results of this study stand in contrast to the Keynesian view that unemployment stems largely from an unwillingness of consumers and investors to spend. The results even take us beyond the new classical hypothesis that monetary and fiscal policies to combat unemployment are at best ineffective and possibly counterproductive. The evidence presented here suggests such policies are in fact unnecessary. The so-called business cycle in reality appears to be a monetary policy cycle since unemployment above the natural rate appears to be due mainly to the unstable growth of the money supply.

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BOOK REVIEWS

Dismantling Utopia: How Information Ended the Soviet Union
Scott Shane
Chicago: Ivan R. Dee, 1994, 324 pp.

From 1988 through 1991, Scott Shane, as a correspondent in Moscow for the *Baltimore Sun*, experienced firsthand the collapse of the Soviet empire. During those tumultuous years, the cracks that had always existed in the communist system of central planning and single-party rule widened until the system itself had to be dismantled, not merely reformed. Shane provides an insightful account of the fall of the Soviet empire; his central thesis is that "information slew the totalitarian giant."

Under communism, the Soviet state had a monopoly on information. It was the duty of the secret police, the KGB, to know everything about everyone and the duty of bureaucrats to run the economy like a machine. But it was only a matter of time before the inherent contradictions of the Soviet system would clog the wheels of the giant machine and bring it to a halt. That time came with the ascent of Mikhail Gorbachev to power in March 1985.

When Gorbachev became head of the Soviet Communist party, he recognized the crisis that confronted the rigid system of central planning in a world that was becoming increasingly competitive and in which information technology was changing economic and social realities. He persuaded the party elite that if socialism were to survive, economic restructuring (perestroika) would be necessary along with greater openness (glasnost) so that information could be better utilized. What he failed to realize, however, was that once his policy of glasnost took effect, there would be no turning back—people could see for themselves that the only way toward a normal life and improved living standards was to end communism and let markets deliver what consumers wanted rather than what the state dictated.

Shane shows, with a journalist's eye for detail, how the thaw in information control exposed the horrors of Stalinism, the corruption of central planning, and the illusion of "the Soviet family of nations." He begins his story, however, with a glimpse of just how uncertain any prediction of the demise of the Soviet police state would have been in 1985.

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One should not forget what it was like in the Soviet Union only a short time ago and how absurd the Soviet system was. Under the infamous Article 70 of the Soviet criminal code, anyone who tried to weaken the Soviet state was suspect and liable to end up in prison. The arbitrary interpretation of the law made any exchange of information outside official channels dangerous.

Andrei Mironov was one of the last to be tried under Article 70. In chapter 1, Shane tells Mironov's story and notes that his crime was "information." He was considered "worse than a murderer" because he "systematically listened to broadcasts of foreign radio stations,. . .became acquainted with literature published abroad, and entered into contact with foreigners and people with negative views of Soviet reality." He "declared that the Soviet economy is on the verge of collapse," decried "the absence. . .of democracy, personal rights and freedoms," and openly acknowledged "the superiority of the West" (pp. 40–41). That was in 1985. In February 1987, Mironov was released as a result of glasnost, but he continued to be tracked by the KGB. In such an environment, who would have predicted that the Communist party would lose its monopoly on power in March 1990 and that the Soviet Union would cease to exist by the end of 1991?

The increasing tension between information control and economic growth caused the Soviet crisis to come to a head in the late 1980s, argues Shane. Although Gorbachev sought to capitalize on the new information technology, to increase Soviet economic power, he also sought to maintain party control. As Shane writes, the architect of perestroika and glasnost only wanted "to renew socialism, not to destroy it." That impulse is clearly visible in chapter 2.

When Gorbachev was elected to head the Soviet Communist party, on March 11, 1985, he urged his comrades "to continue to expand glasnost." But his purpose was to energize the state and the party, not to dismantle them. As he stated, "The better informed people are, the more intelligently they act and the more actively they support the Party" (p. 65).

In the 1930s, people wanted to believe in the superiority of central planning as a way of organizing economic activity. But, by the 1980s, people were tired of empty promises. Glasnost fueled their anger as they discovered that most of the things they had been taught about Soviet paradise and capitalist hell were fabricated. Alexander Tsypko, a prominent Soviet philosopher remarked, "It is hard—very hard—to admit that your life and your work are being senselessly wasted and that you are living in an unnatural, false society, headed with your country for the dead end of history" (Tsypko 1991: 286).

The dismal state of Soviet information technology and the strict controls on information resulted in only 200,000 microcomputers in the USSR in 1987 compared with about 25 million in the United States. That statistic, writes Shane, is "a telling symptom of the economic crisis Gorbachev inherited."

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Chapter 3, "What Price Socialism? An Economy without Information," could have been written by Ludwig von Mises or F. A. Hayek. Although Shane nowhere mentions the pioneering work of the two Austrian economists, who long ago predicted the impossibility of efficiently allocating resources without competitively determined market prices and private property rights, his findings show that they were right and Marx was wrong. This chapter can be profitably read by both economists and non-economists—it gets to the heart of the information failure in the Soviet system of central planning without getting mired in technical jargon.

Shane shows the difficulty of trying to ration scarce goods without the price mechanism and the loss of freedom that occurs when economic life is strictly controlled by the state. By keeping the prices of consumer goods artificially low, the Soviet planners created the ubiquitous "waiting line." Around that institution grew "an elaborate subculture. . .with its own habits and rules." The odd thing is that shortages appeared even for goods that the Soviet Union produced in abundance. In the late 1980s, for instance, the USSR produced more than three pairs of shoes for each citizen, but people had to wait to buy shoes. The problem was that the available shoes did not reflect consumers' tastes: the shoes were made to fulfil a government plan, not to satisfy market demand. Thus, consumers had to wait in line for hours to find shoes that fit and were stylish—and most of those shoes were imported.

That "malfunction," argues Shane, was due to information control:

> Prices are information—the information producers need in order to know what and how much to produce. In a market for a product as varied in material and design as footwear, shifting prices are like sensors taped to the skin of a patient in a medical experiment; they provide a constant flow of information about consumer needs and preferences. When the state controlled prices, it deprived producers of information about demand [p. 77].

The politicization of economic life in the Soviet Union meant that "prices functioned as propaganda and therefore malfunctioned as economic indicators." Keeping the prices of food and housing artificially low helped support the myth of a Soviet socialist utopia or, as Shane puts it, "Controlled prices were an indispensable prop for the Soviet illusion" (p. 79).

Without the feedback of prices based on demand and supply, planners had to make production decisions on the basis of past data rather than on current consumer preferences. As a result, production targets could change dramatically, as could prices. In the case of laundry soap, for example, an acute shortage turned into a giant surplus in less than two years. Without the guidance of prices, "the soap industry was like a hugh truck with no steering wheel, careening from one curb to the other" (p. 84).

Because the state empowered bureaucrats to set prices and made illegal what was natural—the inclination to make one's self and one's

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family better off by private production and market exchange—people had a strong incentive to break the law. The "shadow economy" became a way of life and helped people survive. Those who operated in the parallel market economy were "economic dissidents," argues Shane. "By exercising economic freedom, they were challenging the state's monopoly on the economy, just as a political dissident who asserted freedom of speech or of the press challenged the state's monopoly on ideology" (p. 92).

The Soviet system was totally corrupt. Those in power readily accepted bribes from those who found market activity more lucrative than following orders from party bureaucrats. Shane provides numerous examples of such corruption: from the illegal use of Xerox machines by workers at the Communist party's headquarters to "the Uzbec affair," in which party members enriched themselves by underreporting cotton production, selling the residual on the black market and accepting large bribes. "What became increasingly clear after 1988," writes Shane, "was that the Stalinist economy, still essentially intact, could not be reformed. It could only be dismantled, and a market economy grown in the ruins" (p. 98).

In the remainder of the book, Shane describes the forces that brought about the collapse of communism and the important role glasnost played in that process. Chapter 4 ironically shows that the KGB was the force behind Gorbachev's decision to relax controls on information and allow greater access to new information technology. The KGB recognized that if the Communist party was to stay in power, the economy had to be strengthened. To do so, however, required that the Soviets participate in the information revolution that was transforming the global economy.

In Chapters 5–7, Shane carefully documents the rapid changes that took place in Soviet culture after Gorbachev began to relax information controls in 1987. As a result of greater freedom of information, people began to learn the truth about Soviet history. Indeed, Shane notes that "by mid-1988 so much had been published that contradicted the textbooks that school history exams for the year had to be canceled" (p. 123).

The main communist medium of propaganda was television, but, with glasnost, new programs were allowed and broadcasters began to cover politics in an exciting way. On May 31, 1989, former Olympic weight lifter Yuri Vlasov, a legislator in the Congress of People's Deputies, launched a vicious attack on the KGB that was carried live on Soviet television. Shane estimates that Vlasov's speech was viewed by nearly 200 million people. Television allowed Vlasov and others to reveal the lies and atrocities of the KGB and its reign of terror. Once those lies were exposed, the truth could no longer be concealed. Films that had been hidden away by the Soviet government were made public for the first time. People were able to see, for instance, the faces of starving peasants during the 1932-33 famine in which up to 7 million people lost their lives. It is noteworthy that, "compulsive about record-keeping, the Soviet government filmed everything and locked the films away, inadver-

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tently creating a mother lode of material for television glasnost in the 1980s" (p. 160).

Glasnost also expelled the idea that markets are dehumanizing. World-famous eye surgeon Sviatoslav Fyodorov, for example, told a TV audience that, rather than making people insensitive, the free market cultivates "normal human relations." Whereas under communism, "we've forgotten what kindness is, humanism, nobility, self-esteem. We've been turned into an appendage of a huge bureaucratic machine" (p. 161).

To contrast the barrenness of the Soviet economic landscape with the bounty of market-based economies, a popular Soviet TV program, *Vzglyad*, depicted the difference between West German shops and a Moscow factory. While the shops were filled with goods that consumers wanted, the factory was filled with busts of Lenin that were piling up on shelves—and the Soviet army was the prime buyer. The visual effects of TV on popular thinking were dramatic. As Shane notes, "Television was not renewing socialism, it was torching socialism; it was not criticizing the system, it was blowing it up" (pp. 176–77).

Gorbachev half-heartedly tried to recontrol television, but the tide was against him: the most popular TV personalities had already left the Communist party and most people were in no mood to have their newly won freedom restrained. Even though programs like *Vzglyad* were banned from state-controlled TV, the central government was unable to enforce the ban in the information age—cable TV and video recorders enabled people to keep their favorite shows on the air. Moreover, nearly 75 million people could still tune in to the reformist station in Leningrad, which was kept open by Mayor Anatoly Sobchak. The die was cast when Yeltsin succeeded in getting permission for an independent Russian TV network in early May 1991. The news could now be broadcast in Moscow without central government intervention.

While the press was restoring Soviet history and television was reviving politics, the publishing industry was creating an explosion in pop culture and normalizing everyday life. In 1987 most Western books were either banned or unavailable in the USSR, but by 1991 there were no restraints and everything was available. "This explosion of the printed word was a revolution," notes Shane, "and it was a reflection of the revolution that was taking place in people's minds" (p. 184).

In Chapter 8, Shane discusses the erosion of "Leninist faith" that took place after 1987. The "death of the Soviet illusion," writes Shane, was "not by tanks and bombs but by facts and opinions, by the release of information bottled up for decades" (p. 215). The coal miners' strike in March 1991 illustrates the psychological change that was occurring as glasnost began to thaw Communist party loyalty. At first the miners thought that life could get better under communism and only demanded reform, but by 1991 they knew the entire system had to be changed. As one mining leader told Shane,

> We have to break the old system, the idiocy that's driven us to destitution for seventy-three years. Over the last two years we've

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> understood that economic reform is impossible without a change in the institutions of power: the Communist party, the KGB, the military-industrial complex, these imperialist-monopolist ministries [pp. 229–30].

That leader, Anatoly Malykhin, also recognized that as long as mines were owned by the state—"belonging to no one"—nothing would improve.

Without glasnost, Malykhin and many others like him would have remained uninformed and ineffective. But with the increased information available in newspapers and on television, the new economic dissidents became a powerful force for dismantling the Soviet empire.

In June 1991, Boris Yeltsin, who had left the Communist party, became the first democratically elected head of Russia. In August, hard-liners staged a coup to oust President Gorbachev and to prevent the dissolution of the USSR. When Yeltsin showed his defiance of the junta by mounting a tank, his heroic action was captured by CNN and broadcast to thousands of Moscovites who rallied to his cause. The Communist party was no longer capable of enforcing an information blockade. As Shane observes in Chapter 9,

> Inside Soviet borders the new information was reproduced, multiplied, amplified, and disseminated by the technology that had flooded the country. Fax machines and photocopiers, video recorders and personal computers outside the government were no longer exotica but a sprawling, living nervous system that linked the Russian political opposition, the republican independence movements, and the burgeoning private sector. Tied informally together, this equipment constituted a network of considerable scale [p. 262].

The unintended consequence of glasnost was to paralyze the KGB and transform the USSR into a "coup-proof society." In his Epilogue, Shane writes, "In the global information economy, hostile relations with other countries and totalitarian control at home will be penalized severely" (p. 289). That message should worry China's aging communists and dictators everywhere. The challenge in the 21st century will be not only to dismantle the last vestiges of totalitarianism but to build a free and civil society. Information helped destroy the Soviet empire, but, as Shane points out, the process of creating new institutions based on the rule of law is far from completed.

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How the Farmers Changed China: Power of the People
Kate Xiao Zhou
Boulder, Colo.: Westview Press, 1996, 265pp.

I recommend this book, without reservation. It is a remarkably lucid and interesting description of the process of rural reform in China. It is a book worth reading by both the specialist on China and one that knows relatively little about China but wants to learn something about why that country embarked upon its successful reforms at the end of the 1970s.

The author makes the persuasive case that it was the farmers that were responsible for the reform process that began in 1978, and it is they that have been the primary force behind the enormous success of the reforms. Briefly, she argues that the failure of the communes—the system imposed on agriculture and farmers by Mao Tze-tung in 1958—to expand food production at a rate greater than population growth was due to the unorganized resistance of farm people.

Farmers were given the land in the late 1940s and early 1950s in recognition of their support for the Communist Party. But they never received titles and, by 1958, all their productive property and all the land had been socialized, without any compensation. The immediate incidence of the great famine that cost at least 30 million lives got the communes off to a bad start. During the famine period there were a number of reform efforts to overcome the worst incentive defects of the commune system, including lending land to the farmers and giving discretion to the brigades. But those experiments lasted only a few years.

Under the communes every aspect of the lives of the farmers was controlled. The farmers were told when to go to work and what to do, nonfarm work of any kind was severely limited, rural markets were greatly restricted and, due to controls on migration, the farmers were no more free than serfs. A mixture of egalitarianism and poorly designed payments methods meant that there was very little relation between labor productivity and reward. Real incomes hardly increased at all during the commune period. The state took over most of the functions that had traditionally been the province of the family.

In Chapter 3 the author describes the efforts of farmers, especially the very poor, to break away from the rigidity of the communes. After Mao's death in 1976, a number of experiments that assigned land to individual households or small groups of households began. Some of those experiments were individual, with cadres being bribed to permit a family to farm a plot of land. Much of the experimentation occurred in Sichuan and Anhwei Provinces, with the encouragement of the provincial leaders—Zhao Ziyang and Wan Li. The experiments sanctioned the assignment of land to small groups of households, but not to individual households. To some degree the early support for the more modest reforms was an attempt to save the basic structure of the communes. In other words, it was a plan designed to prevent the spread of assigning land to individual households—what later became the household responsibility

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system (*baochan daohu*). While most of the shifts to the household responsibility system were the result of individual efforts and collusion with the local cadres, in one village in Fengyang County, Anhui Province, 18 households signed a pact (with their thumbprint) to keep what they were doing a secret. The pact included a promise that, if a cadre came to grief, "we are willing to raise the children of village cadres until they are eighteen years old" (p. 56). When I had the privilege to visit the village where this pact took place and talk to one of the leaders of the group, I learned that under the communes the village was so poor that most families sent out people to beg almost every year of the 1970s. When land was assigned to households, output increased greatly and the news spread rapidly.

Zhou supports the view that the reform of the communes and their eventual abolition was due to this bottom-up process—the leadership did not support assigning land to households. In fact, the famous December 1978 decision of the Communist Party made *baochan daohu* illegal. The leadership was willing to accept some reform of the communes, such as giving responsibilities to groups. But, apparently because of the widespread illegal assignment of land to households, a decision was reached in the fall of 1980 to permit the household responsibility system in the poorest 15 to 20 percent of the communes in the country. However, the large gains in output and incomes were so evident that it was impossible to stop the spread of the system to nearly all communes. By the end of 1984 only a few of the 50,000 communes remained; in fact, most had disappeared by the end of 1983.

There is much, much more. I have emphasized the role of farmers in provoking the transformation of rural policy because this is a generally neglected aspect. There are excellent discussions of the development of markets—how once the restraints on market activities were removed, farmers seized the opportunities and virtually transformed the marketing of food. The socialized system of food distribution was so inefficient and rigid that farmers have been able to largely replace it, much to their and the consumers' benefit.

Chapter 5 provides an excellent discussion of the development of rural industries. The rural industries include collective enterprises, run by townships and villages, and private enterprises. Zhou argues that because of the special treatment received by collective enterprises (access to bank loans, lower tax rates), many of the township and village enterprises (TVEs) are really private enterprises made possible by bribing local cadres. And why not? Both sides gain. The author correctly notes that an important reason for the success of the rural industry has been (and remains) the many weaknesses of the state-owned industries. However, that success required the ingenuity, initiative and hard work of millions of farm people. She notes that in 1987 Deng Xiaoping said that the great success of the TVEs took him and his colleagues by surprise. He added: "The diversity of production, commodity economy, and all sorts of small

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enterprises boomed in the countryside, as if a strange army had appeared suddenly from nowhere. This is not the achievement of our central government" (p. 106).

The next chapter discusses the controls over migration—the *hukou* system under which an individual is registered at the place of birth and approval must be obtained for moving to another place. This system was designed primarily to stop "mindless" migration to the cities. With the abolition of the communes, the control the government had over the lives of rural people was sharply reduced and the enforcement of the *hukou* system has become much more difficult. There is now a large, though unknown, number of rural people illegally or semi-legally living in cities, generally performing the dirty, difficult and dangerous jobs urban residents are unwilling to accept. But even those jobs provide much higher incomes than farming. One of the important results of the control of migration has been to protect the large urban-rural difference in income—urban income is at least three times higher than rural income, even now that millions of nonfarm jobs in the country side have developed. Mao won the revolution, primarily due to the efforts of rural people, but he soon forgot those responsible for his victory.

The book closes with chapters on the one-child policy, rural women, and a concluding chapter "Farmers Changed China." Zhou argues that, on balance, rural women have gained from the reforms. They now have opportunities, such as a nonfarm job or starting their own business, that were never available to them under the old system.

With regard to the one-child policy, Zhou notes that "farm families with increasing economic and political independence were able to resist the sanctions that reinforced the one-child policy in urban settings" (p. 182). The negative reaction to the attempted enforcement of such a policy in the late 1970s resulted in modifying the policy. Thus, in 1984, the government allowed farm families to have a second child if the first child was a girl. However, to be legal and not subject to penalty or fine, the births had to occur at least four years apart.

Having a son is the only form of security for a farm family. While urban residents have pensions, there is no significant pension system available for farm people. While a daughter may be loved as much as a son, the daughter leaves to live with her husband's family when she marries and becomes part of the support system for his parents. Zhou correctly notes how farm families evade the limits on the number of births, ranging from hiding baby girls to bribing local cadres and to paying fines for having a child outside the quota system. But, as the author correctly points out, the decline in fertility in rural areas that has occurred has been due to a reduction in the number of children desired as much, if not more, as to the one-child policy. The increase in real incomes and the availability of nonfarm jobs has significantly increased the value of women's time and thus increased the cost of additional children.

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As I said at the beginning, I highly recommend this book. If you take the time to read it and study it, you will not regret it.

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On Nationality
David Miller
New York: Oxford University Press, 1995, 210 pp.

Even if nationalism itself is not on the rise, as some say, its study certainly is. One aspect that has received too little attention is the intimate relation between nationalism and forms of economic collectivism—especially socialism and welfare statism. This is no idle academic matter: the horrors wrought by the National Socialist German Workers' Party, popularly known as the Nazis, may be directly related to their fusion of two illiberal ideals, socialism and nationalism; and the ferocity of the current national conflicts in the Balkans and Eastern Europe may be traceable to the corrosive effects of socialist institutions on social order and the inclination toward peaceful cooperation.

A few classical liberals, such as the century's leading critic of socialism, Ludwig von Mises, have examined the connection between the two phenomena. As Mises (1983: 77) noted from Vienna in 1919, following the First World War and the fall of the multinational Austro-Hungarian dual monarchy: "Whoever wants peace among nations must seek to limit the state and its influence most strictly." When resources are owned or controlled by the state, rather than subject to several property and freely tradable on the market, then groups will come into conflict over how those resources will be deployed. Under systems of state ownership or control, one solution must be chosen for all, rather than letting individuals and groups choose for themselves, meaning that for some to win others must lose. When the conflict is between national groups that make claims on the full allegiance of their members, the conflict is especially dangerous, for the possibility of compromise or reciprocity is diminished. Nationalism tends to be jealous of cross-cutting interests—which allow individuals to win some even as they lose others. For one group to triumph, others must be suppressed, and, as Mises (ibid.: 56) observed, "Where only the choice is open either oneself to suppress or to be suppressed, one easily decides for the former." As game theorists would point out, in the "game" of socialism, suppression of other groups is the "dominant" strategy.

F. A. Hayek, whose classic work *The Road to Serfdom* (1944) was a shot across the bow of triumphal statism, connected socialism to primitive tribalism and a yearning for the solidarity and the morality of small groups, a yearning which, if extended much beyond the family, would prove incompatible with the requirements of the extended market order. The

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great novelist Robert Musil (1990 [1921]: 109), another Austrian critic of both nationalism and socialism, observed that socialism is "stuck in the ethics of fraternity." The morality appropriate for family members is, however, quite different from that appropriate for governing the relations of the countless strangers one encounters in an extended order.

Recently a distinguished socialist theorist, David Miller of Nuffield College, Oxford, has turned his attention to the issue of nationalism and statism, and has arrived at an analysis similar to that of the classical liberals. Miller recognizes the same choices, but embraces nationalist collectivism rather than cosmopolitan individualism. Whereas Mises and Hayek rejected statism and embraced free markets in the name of pluralism and harmony among national (and other) groups, Miller seeks to bolster socialism (or his second best, welfare statism) by means of a revived nationalism. As Miller points out in his new book *On Nationality*, "the redistributive policies of the kind favoured by socialists are likely to demand a considerable degree of social solidarity if they are to win popular consent, and for that reason socialists should be more strongly committed than classical liberals to the nation-state as an institution that can make such solidarity politically effective" (p. 92).

Miller candidly admits that problems of conflict and instability associated with coercive redistribution "might be resolved by slimming down the obligations of citizenship—turning the state into something closer to a minimal state—or by making state and nation coincide more closely" (p. 72). Miller opts unequivocally for the latter, whereas classical liberals choose the former. In opting for redistributive statism over constitutionally limited government and free markets, Miller recognizes that his commitment to socialism or welfare statism obliges him to embrace nationalism, as well.

What is especially remarkable is that Miller dismisses with open contempt cosmopolitanism and the classical liberal prescription for group conflicts—"slimming down the obligations of citizenship," but ultimately falls back on classical liberal arguments to bolster his own socialist and nationalist position. Arguing against a world socialist state and obligations of international redistribution, Miller appeals to respect for the "autonomy of other nations" which "involves treating them as responsible for decisions they may make about resource use" (p. 108), without, apparently, noting that he is forced to adopt—in defense of national socialism—a core liberal argument against socialism per se, that private property makes rights and responsibility coordinate features of market resource allocation. The classical liberal alternative is only brought in as an element in a *reductio ad absurdum* argument: if we were to reject nationalism, then we would have to embrace free movements of individuals and free trade of goods, but that would be, Miller believes, absurd. Miller is reduced to arguing in a circle: we have national obligations that ground our obligations to the welfare state, and we have obligations to the welfare state that ground our national obligations.

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Of perhaps the greatest significance in this interesting book is the way in which Miller applies the nationality principle to the defense of the contemporary national welfare state, a defense that sheds light on the rise of anti-immigrant violence in Europe as well as on the resentment of immigrants in the American welfare state, such as was revealed by California's Proposition 187 (denying welfare benefits to immigrants). Harvard philosopher John Rawls had offered an influential defense of redistribution in his *A Theory of Justice*, in which divergences from complete equality were to be allowed only if those very inequalities were "to the greatest benefit of the least advantaged" (Rawls 1971: 302). Inequalities not so justified are to be eliminated through redistributive policies. This argument has become in recent years a standard defense of the coercively redistributive state. But just *who* is considered to be the "least advantaged," whose disadvantage provides the benchmark, matters a great deal; is the least advantaged a Somali goatherder or a Mississippi sharecropper? Rawls never adequately answers what determines the boundaries drawn around the groups over which his redistributivist principles are to apply, so Miller seeks to complete the Rawlsian argument: it is nationality that provides the demarcation criterion. Since Miller believes that "nations are like teams" (p. 18), it makes sense that the benefits of teamwork be limited only to the members of the team. Miller ignores two problems with his comparison: first, teams are voluntary associations, the members of which choose to cooperate, whereas states are not; and second, so conceived, the various "teams" that are nation-states will necessarily be in competition, and, as we know, "teams" with the powers of states can compete through organized violence of a most horrifying sort.

If welfare benefits are to be limited to conationals, then the issue of controls on immigration and the free flow of peoples becomes especially important. Mises dealt with these issues quite prophetically in his 1919 study. He first pointed out that "internationalist" socialism could not avoid national conflicts without jettisoning democracy. But he went further and recognized earlier than others that

> the realization of socialism is also possible, however, otherwise than through a world state. We can imagine a series of independent socialist political systems—perhaps nationally unified states—existing side by side without there being a common management of world production. . . . In a socialism of that kind, national antagonisms will not only not be made milder in comparison with the situation in the liberal economic order but will be considerably sharpened. The migration problem would lose nothing of its capacity to create conflicts between peoples. The individual states would perhaps not completely shut themselves off from immigration, but they would not allow immigrants to acquire residence status and to acquire a full share of the fruits of national production. A kind of international migrant-worker system would arise" [Mises 1983 (1919): 93].

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That is a very accurate portrayal of the "guest worker" system of the contemporary welfare state in Mises' native Austria, as well as in other socialist and redistributionist systems. The "guest workers" are forced to pay social security taxes to finance the welfare state, but do not themselves qualify for benefits.

The canonical classical liberal rights to life, liberty, and property are universal, in the sense that they can, at least in principle, be enjoyed by *every* human being; in the term made popular by Manchester University philosopher Hillel Steiner (1994), they are "compossible." But "welfare rights" are of a different sort; they are particular, entitling this person to so much housing, medical care, or other benefits, and obligating that person to pay so much in taxes or forced labor. In practice, welfare rights stop at the border. On a theoretical level, socialists and welfare statists have a bit of a problem: how to justify as "human rights" claims that are not applicable to all humans, but only to those who share the accident of being members of a non-voluntary group. The only solution short of worldwide redistribution through a world state is to jettison cosmopolitanism entirely and to boldly retreat to the primitive tribalism that characterizes premodern societies.

In the process of abandoning cosmopolitanism and embracing nationalism, supporters of welfare statism and socialism put every civilized value and every liberal institution at risk. Miller claims that an "ethical particularist" such as himself can endorse "basic rights" (although he never says how or why they should) but goes on to note,

> The basic rights and the obligations that correspond to them are overlain by the special responsibilities that we have as members of these communities. Moreover, in each community there will be a specific understanding of the needs and interests of members which generate obligations on the part of other members. . . . Thus in one national community (the Republic of Ireland, for example) religious education may be regarded as a shared need which should properly be funded by the community as a whole, whereas in another (the United States for example) it may be seen as a private matter which should be left to each person to consider, and to provide for their children as they saw fit [p. 74].

In other words, whatever "basic rights" individuals may have (for which Miller gives no arguments), the state may still legitimately coerce religious dissenters to support the state religion. If the right to religious dissent is not a basic right, it is not clear what is.

In this book Miller does not seem to recognize just how dangerous to civilized values his appeal to nationalism is. He neatly sidesteps the dangers of nationalism by pointing out that "the aim of this book is by no means to offer a blanket defence of nationalism, but to discriminate between defensible and indefensible versions of the principle of nationality" (p. 40). Thus, the nationalism that Miller has in mind is by definition not an indefensible—or "bad"—nationalism. The late Ernest Gellner,

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also a keen student of nationalism, noted in his *Conditions of Liberty: Civil Society and Its Rivals* that enthusiasts for socialism tend to hide a normative element in their definition of socialism: "They do not use the term 'socialism' as a neutral term merely designating a specific set of social arrangements. Rather, they use it as a term whose primary constituent is the notion that it is *good*. They may not know precisely what it is, but they do know that it is good" (Gellner 1994: 151). Thus, if a putatively socialist regime generated some bad consequences, then it was not really socialist, after all.

David Miller has now applied a similar approach to nationalism; he favors good nationalism and opposes bad nationalism. That he does not seem to appreciate the dangers of the move he makes is evidenced by a remarkable characterization of the problem in his earlier essay on "The Ethical Significance of Nationality" that appeared in the journal *Ethics*; he cites as part of the reason for the distrust of nationalism among many thinkers "the 20th-century experience of rampant nationalism, an experience distasteful to liberals and the Left alike." (Miller 1988: 653). To describe the Holocaust, the slaughterhouse of the Balkans, or the Rape of Nanking as "distasteful" indicates how little even a fundamentally decent man such as David Miller seems to appreciate the dangers of nationalism.

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Whither Socialism?
Joseph E. Stiglitz
Cambridge, Mass.: The MIT Press, 1994, 338 pp.

For more than two decades, Joseph Stiglitz has produced some of the most important work in the new information economics and New

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Keynesian economics; it is only a matter of time before he is nominated for the Nobel Prize in Economic Science.

Whither Socialism? is based on his Wicksell Lectures presented at the Stockholm School of Economics in 1990. It provides a convenient and well-written summary of the central themes of the new information economics, and for that reason alone should attract the few uninitiated economists who have so far hesitated reading the new literature.

The book's provocative title, however, should also attract a broad readership, especially those interested in the big questions of comparative political economy and the burning problems of socialist transformation. At a time when we have witnessed the collapse of socialist regimes across Eastern Europe, Stiglitz confidently suggests that socialism might be resurrected by first formulating a more appropriate understanding of both socialism *and* capitalism. Thus, he jumps right into the midst of the great debate concerning the future of capitalism and the possibility of any real socialist alternatives.

Stiglitz argues in Chapter 2 that market socialism failed in Eastern Europe because it was based on a faulty model, that of Oskar Lange and Abba P. Lerner. And the reason why the Lange-Lerner model was faulty is that it was founded on a notion of general economic equilibrium that (at least implicitly at the time of the socialist calculation debate) required Arrow-Debreu notions of a complete set of perfectly competitive markets—not only spot markets but futures markets as well. If Arrow-Debreu really describes the capitalist system, Stiglitz argues, it would also provide an empirically feasible case for market socialism, if not outright central planning. But, writes Stiglitz (p. 24):

> Casual observation would suggest that market socialist economies are not identical to capitalist economies, not even remotely so. The model of market socialism underlying that theorem is seriously flawed.
>
> But our contention is that it is equally important to observe the model of the market economy—underlying not only that theorem but also the fundamental theorems of welfare economics—is seriously flawed. With a bad model of the market economy and a bad model of the socialist economy, no wonder that any semblance of the equivalence of the two could, at most, be a matter of chance.

Stiglitz then examines the standard model's welfare claims, reacquainting us in Chapter 3 with the now well-known Greenwald-Stiglitz theorems that demonstrate that a world with imperfect information (leading to incomplete markets, moral hazard problems, and so on) vitiates the First Fundamental Theorem of Welfare Economics: the purely free market can *never* reach a constrained Pareto optimum under such conditions, but government intervention can *potentially* create Pareto improvements in the economy. In Chapter 4 he calls into question the Second Fundamental Theorem, which otherwise establishes a general case for decentralization of the economy, by raising further questions about the

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prevalence of nonconvexities and externalities (including in some cases what are otherwise considered mere pecuniary externalities).

Stiglitz further explores those criticisms by discussing how, *contra* Arrow-Debreu, decentralized plans are often coordinated by more than prices in actual capitalist economies (Chapter 6), that the presence of rents, significant sunk costs, strategic barriers to entry, and so forth all call into question the Arrow-Debreu concept of competition (Chapter 7), and finally, in Chapter 8, that the Arrow-Debreu concept of a complete set of markets (including forward markets for each commodity) leaves out the entire question of innovation. In Chapter 11, "The Socialist Experiment: What Went Wrong?," Stiglitz argues that the theoretical limitations of the Arrow-Debreu model (and, thus Lange-Lerner) go a long way toward explaining why the market-socialist experiences in Eastern Europe failed.

Theoretically, Stiglitz's negative assessment of the mainstream general equilibrium model is formidable, and it does indeed amount to a (non-Austrian) rejection of the celebrated Lange-Lerner "solution." But Stiglitz is empirically weak. His interpretation of market socialism in Eastern Europe, such as Hungary, is colored, if not blinded, by the Lange-Lerner spectacles: he seems to believe that those experiences were an application or "adaptation" of the Lange-Lerner *model*. Perhaps it is convenient for an economist, especially with high opportunity costs of his time, to interpret the complex historical record in this light, but misplaced concreteness surely carries a scholarly cost.

Given Stiglitz's negative critique, it comes as no surprise that the standard Arrow-Debreu model has little if anything to say about current socialist transformation, because it is not a model that can deal with dynamic transition problems. Stiglitz, accordingly, offers his own tentative policy advice in Chapter 15, based on the new information economics established by the Greenwald-Stiglitz theorems. But, despite Stiglitz's hope of establishing a new "paradigm" in economic theory, his own application of the new information economics to transition issues is purely mainstream: state economic policy should minimize barriers to entry, establish general and credible rules of the game (which includes hard budget constraints and meaningful profit-loss measures), keep a check on inflation, change the incentive-structures of management (perhaps before encouraging full-blown privatization) and, finally, take the opportunity to create a more equal distribution of wealth from the start, a sort of "people's capitalism." Outside of a couple of Austrian and renegade neoclassicals who call for anarcho-capitalistic shock therapy in Eastern Europe, most neoclassical economists nurtured on Arrow-Debreu theorems generally would agree with Stiglitz's recommendations. Moreover, Stiglitz's theoretical differences with the mainstream do not make much of a policy difference for East European transition economies. What, then, are we to make of his book?

In terms of a debate about technical economics, free-market economists will find Stiglitz's book both challenging and frustrating. They should be

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challenged by Stiglitz's thoroughgoing critique of the perfectly competitive model of capitalism. To the extent that they believe the perfectly competitive model describes, or can describe, actual or future capitalist economies, neoclassical economists invite Stiglitz's criticisms, and they should rise to the challenge by providing both formal and empirical research to the contrary. Austrians, on the other hand, will be irritated if not frustrated by Stiglitz's occasionally questionable interpretations of F.A. Hayek (pp. 24, 273) and especially his tendency to lump Austrian efficiency arguments together with those of their free-market neoclassical brethren (p. 43). Austrians will probably maintain that Stiglitz's argument is "really" against *neoclassical* general equilibrium modeling and its corresponding welfare claims, but, as I have tried to demonstrate elsewhere (Prychitko 1996), Austrians often import capitalist-efficiency arguments from their neoclassical colleagues, and thus unwittingly invite their own frustration: yesterday Lange, today Stiglitz.

Yet the book hopes to move well beyond the narrow confines of technical economic theory, as its title implies. Stiglitz himself is trying to join the broader dialogue in political economy, and wonders at the end of the book "whether the insights of modern economic theory and the utopian ideals of the nineteenth century can be brought closer together?" (p. 277). But it is precisely here that Stiglitz invites criticism, not so much because he wants to save some socialist ideals (incredibly, however, through a "people's capitalism" [p. 265]), but rather because of his unexamined *presuppositions* regarding how to do so.

In Chapter 13, "Asking the Right Questions," which anticipates his policy proposals, Stiglitz insists that we should not ask whether or not the state has a role to play in the economy, but rather how large a role, and in what specific tasks (p. 231). For Stiglitz, the problem is posed correctly only when we seek an "appropriate balance between markets and government" (p. 267). Stiglitz offers no historical or comparative-institutional reasons about the nature of the modern state, nor does he bother to cite the classic analysis of Joseph Schumpeter (1918) or the contemporary arguments of Claus Offe (1984) to support his claim. No, Stiglitz formally demonstrates the potential efficiency-enhancing properties of the state based on the Greenwald-Stiglitz theorems, and comfortably believes that solutions to our worldly problems (and, apparently, the flourishing of certain utopian ideals) can become illuminated by formulating a new set of mathematical theorems to replace the old theorems of Arrow-Debreu and Lange-Lerner (pp. 4–6, 231–32).

To his credit, Stiglitz mentions that economics must be recast as something more than a constrained maximization problem, but his own alternative—a mathematical theorem that encompasses more complex, nonlinear vectors—nevertheless remains encrusted in an unexamined formalism essentially the same as that of the neoclassical economists he criticizes. This becomes more troubling if Stiglitz hopes to break beyond mere intellectual puzzling about the world and tries to use his models to

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change the world. I suggest that Stiglitz reacquaint himself with Hayek's discussion of scientism (Hayek 1979), delve into Jurgen Habermas's (1974) discussions of the problems linking abstract theory with feasible practice (especially because he hopes to answer the Big Questions with mathematical models), and review Offe's (1985) examination of the logics of state planning in the market complex. As a contribution to the cause of salvaging socialist-utopian ideals, Stiglitz's project has to inform itself with the best of that literature.

Finally, if Stiglitz's main insight is generally correct—that the state cannot be ruled out (or, in his case, that it should be ruled in)—then he cannot continue to ignore the grand constitutional questions: How will the coercive institutions of the state be constrained? What is the relation between the state and civil society? He cannot continue to ignore the crucial questions regarding both the state's power to enforce rights, and the rights of the state-collectivity itself. His book fails to persuade as a project in contemporary political economy because it does not seriously address the broader constitutional concerns that James Buchanan (1975) and other economists have raised.

In sum, *Whither Socialism?* is a fine, informal presentation of the technical themes in the new information economics, written by the best in the field. It could serve as a supplementary text for courses in industrial organization and strategy and in comparative economic systems, suitable for advanced undergraduates. Despite its great merits, however, I think the book has not come to terms with the fundamental historical, political, and philosophical issues implied by its own provocative title. One might retort, of course, that, as brilliant as Stiglitz is, he is just an economist and cannot be expected to address all the difficult interdisciplinary issues. True, but by casting his discussion in terms of the great socialist transformations of our age, and fostering the hope of constructing a new and feasible socialist model that retains powerful utopian ideals, Stiglitz, I fear, is simply wrapping formal, abstract economics in a cloak of radical political-economic change. It is much more fun to read technical economics in this way, but *Whither Socialism?* remains quite mainstream in its core and in its vision.

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The victory of freedom over totalitarianism has been overwhelming, but it is far from fully secured. Indeed, the toughest part of the struggle lies ahead. The dismantling of statism and the dispersal of the economic and political power expropriated by a despotic bureaucracy are exceedingly complex tasks. They are demanding enormous sacrifices from those peoples who still labor under the illusion that political democracy and economic liberty provide instant solutions to all problems. These peoples need to overcome the legacy of stupefaction and rigidity that collectivism has left behind. They must restore their sense of individual responsibility. They must put to rest the alienating assumption, fostered by communism, that all problems must be referred first to the state for solution, and only as a last resort to themselves. Bringing about such a profound and widespread change of ingrained attitudes is a far more daunting challenge than ousting petty tyrants ever was.

—Mario Vargas Llosa

"The Culture of Liberty."
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